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MICRO Computer MART

ISSUE 140

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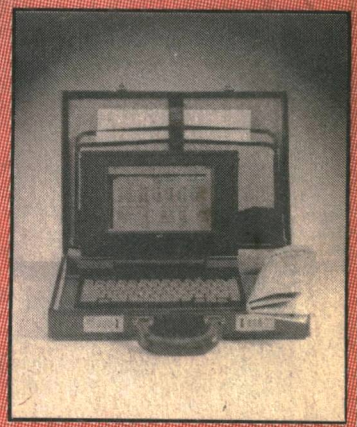
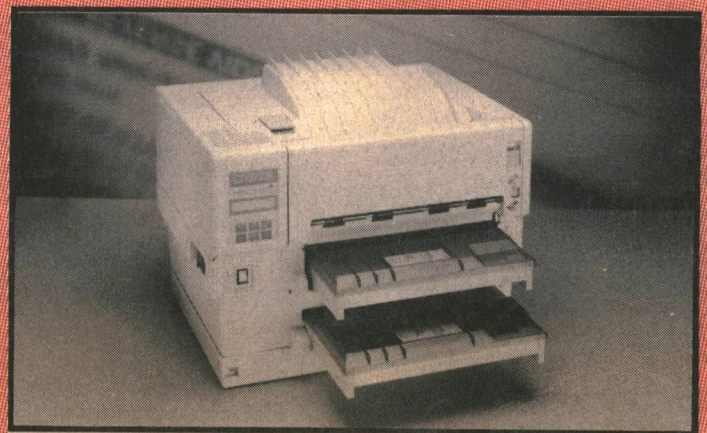


Cartoon Maker

Atari Column

PC Eye



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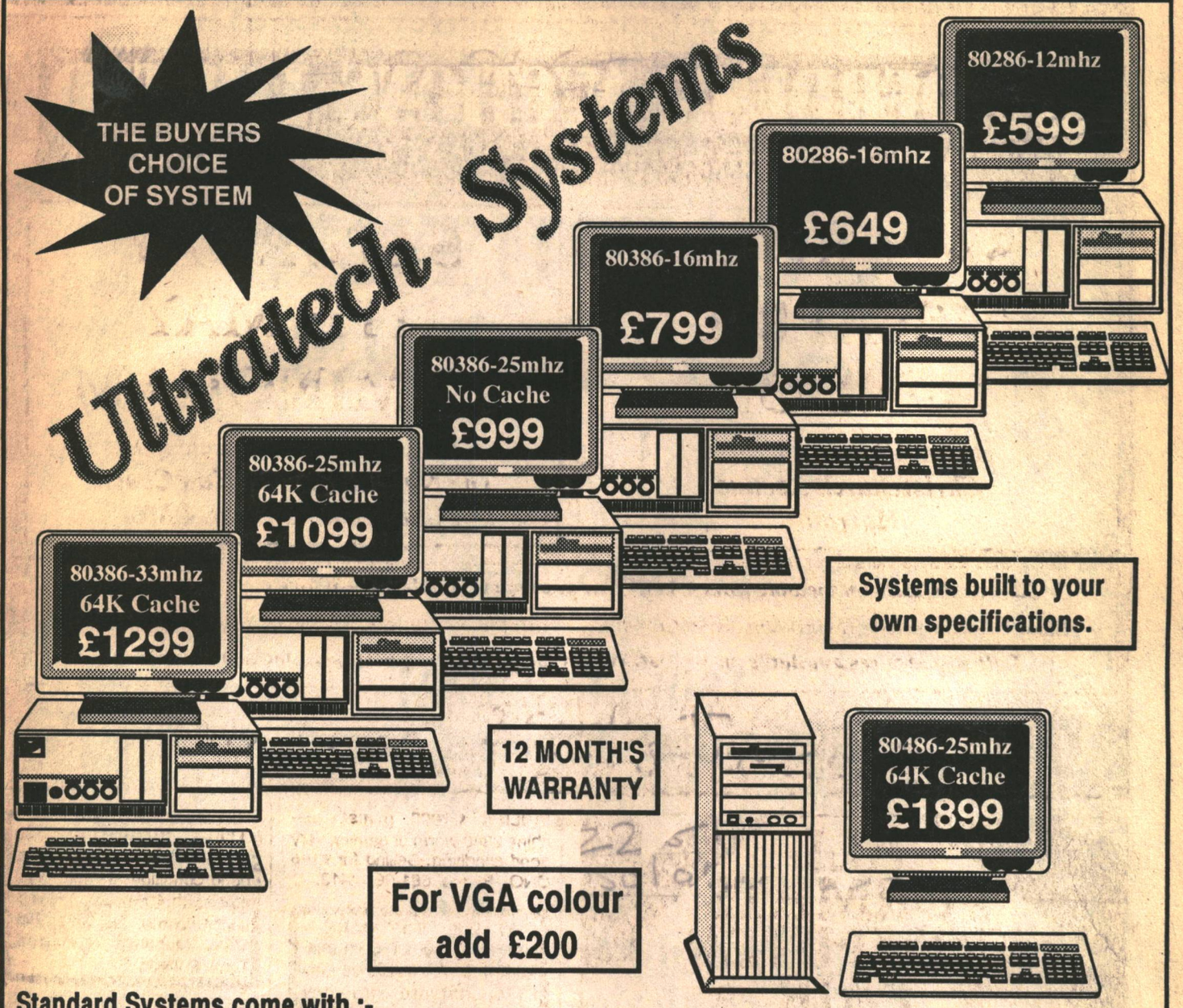

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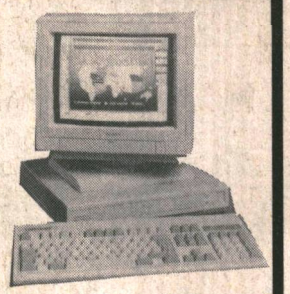

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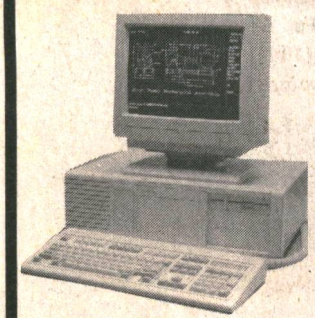

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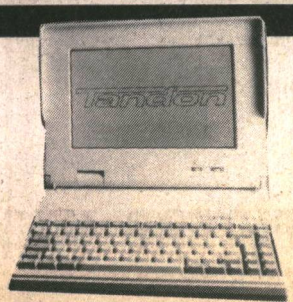

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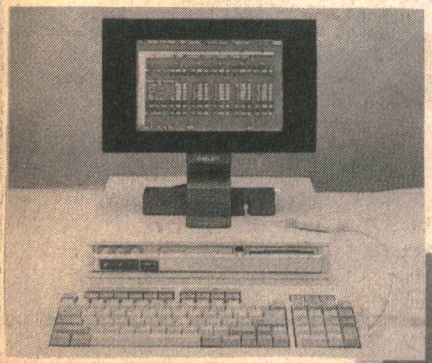

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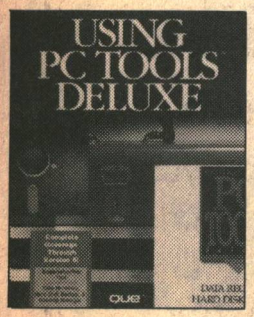

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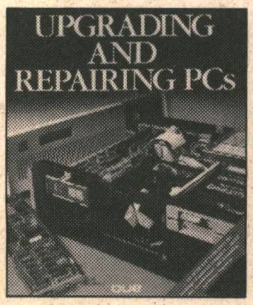

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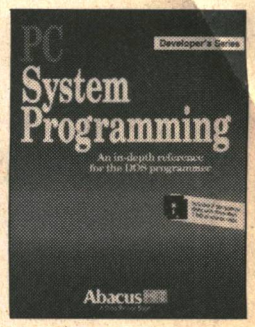

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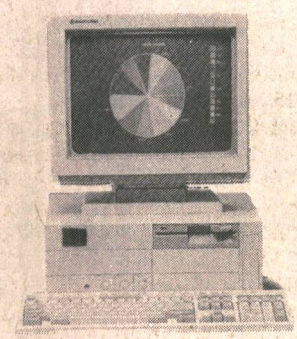

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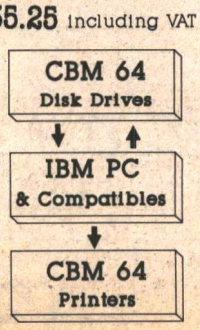

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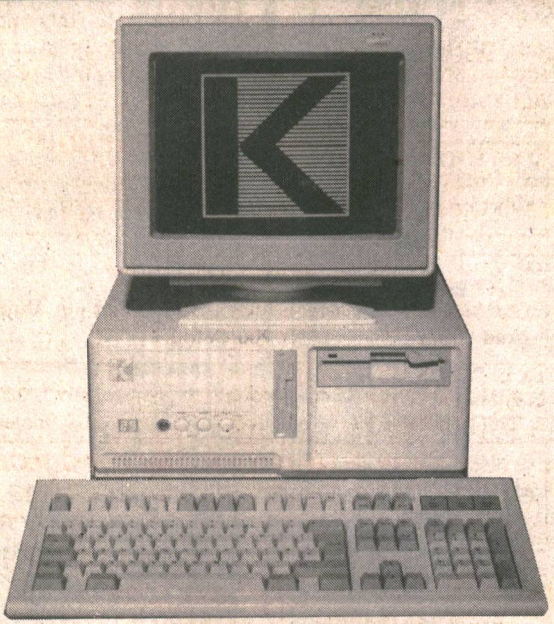

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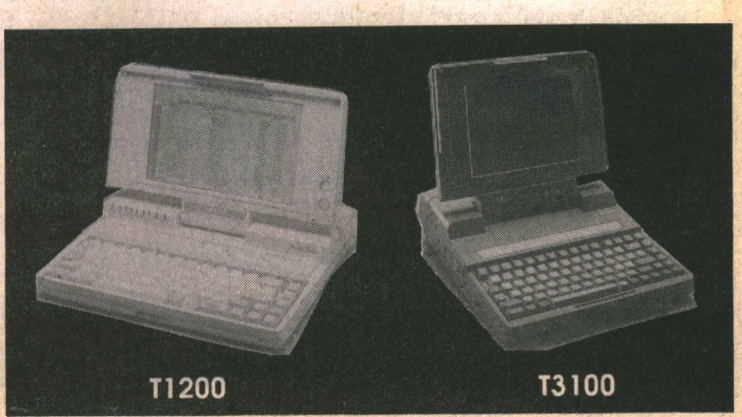

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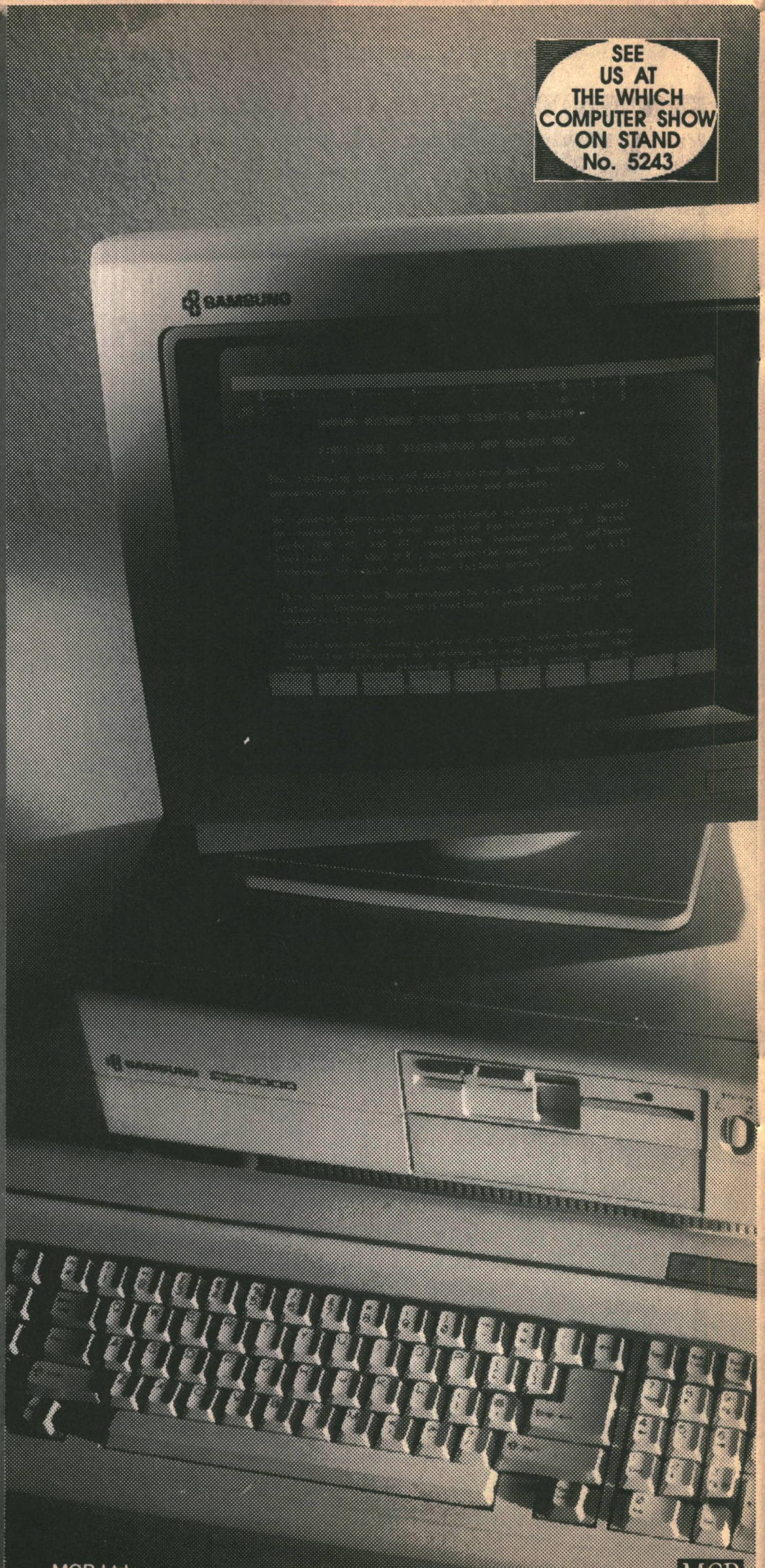

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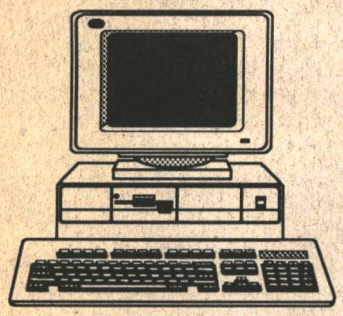

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ASCII to WP5 format, along with other utilities.
WP-012 WORD PROCESSING FOR KIDS
Childrens Word Processor with large text and easy to understand menus.
WP-019 FONTASTIC (2 Disks)
Effects machine & simple text ed. , with many fonts and effects to liven up your documents.
WP-027 PC-WRITE LITE (2 Disks)
A simpler version of the program PC-WRITE, which is ideally suited for Disk based systems such as Laptop computers.

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I ching and Tarot interpretations. Let your micro do the hard work.
GEN-010 CITY DESK
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GEN-016 EZ LABEL.
Make, Maintain and print mailing lists and labels, easily.
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GRAPH-009 VENTURA PUBLISHER TUTOR
Utilities and instructions for Ventura Publisher
GRAPH-012 VGA PAINT
Excellent paint program for VGA monitors.
GRAPH-018 KID PAINT
Colouring book on computer. EGA Req'd
GRAPH-020 TURBODRAW
From simple charts to engineering drawings.
GRAPH-021 TURBOFLOW
42 Standard symbols. flowcharting program. mouse driven.
GRAPH-030 PCX XLIP ART I (10 Disks)
Collection of clipart and pictures.
GRAPH-039 COOPER GRAPHICS (6 Disks)
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UTIL-001 DESK COMMANDO
Similar to side kick, all the usual gadgets available.
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Easier to learn than from the manual.
UTIL-015 POWERMENU
Superb hard disk menu organiser, usual features.
UTIL-029 BEST UTILITIES
General utilities program with many features.
UTIL-039 NET TOOLS
This is for the Novell network LAN, Get the most from your Novell Network.
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Simple menu program, with Password protection, etc...
UTIL-064 COPYQM
Mass disk format and copy program.

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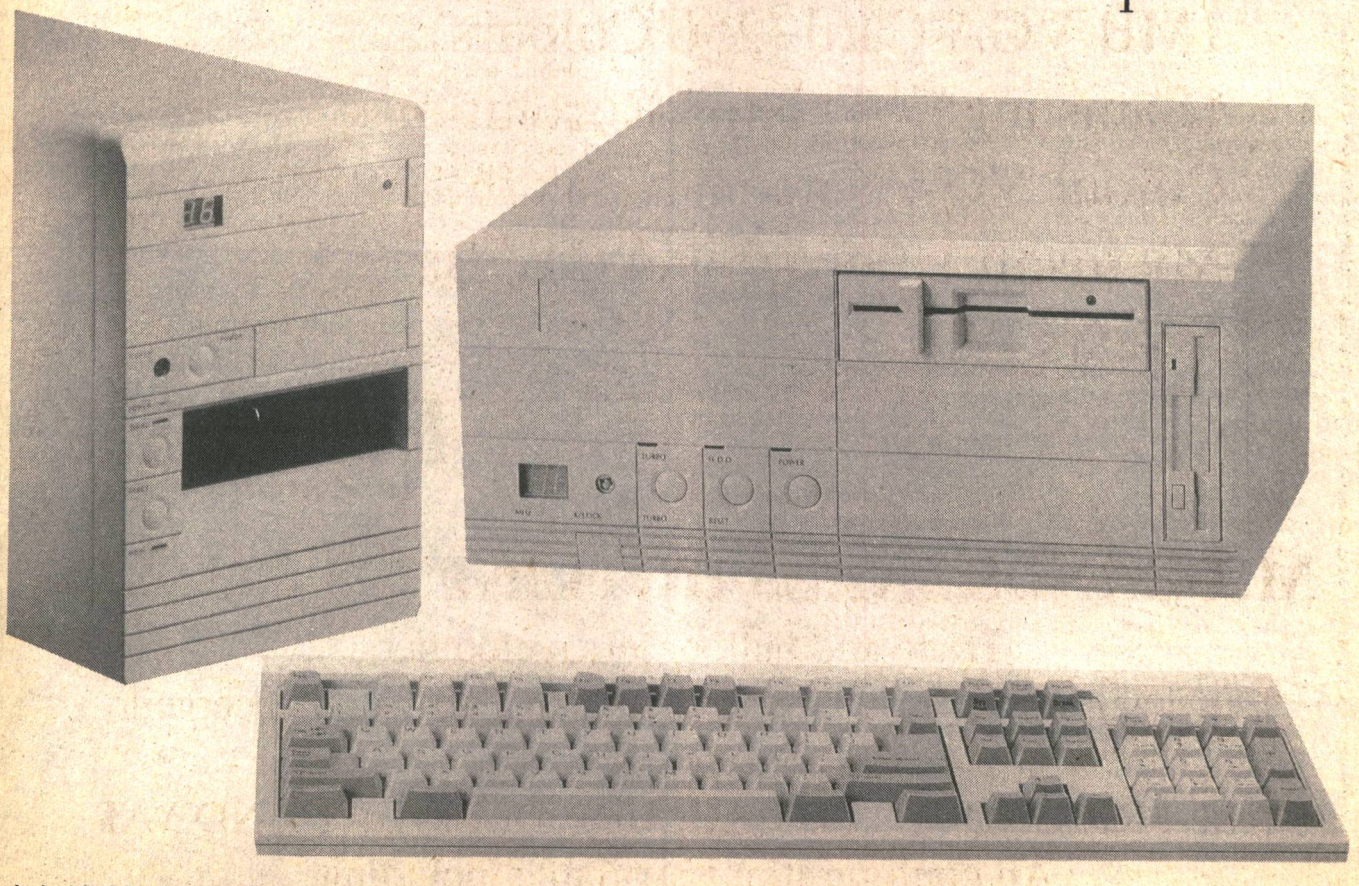

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FUTURE DOMAIN

Future Domain's Disk Maestro 6.0

Future Domain's Roger Budris recently announced the release of a new version of the company's popular Disk Maestro TM Disk Management System, which apparently operates with its complete line of high-performance Small Computer System Interface (SCSI) host adaptors and host adaptor kits for use in IBM/PC/XT, AT, 386,486, Micro Channel and compatible personal computers.

Disk Maestro 6.0 integrates Future Domain SCSI 16-bit or 8-bit adaptors with more than 140 models of SCSI 3.5-inch and 5.25-inch disk drives including fixed disk, magneto-optical, removable and high-capacity floppy disk drives. Users may support virtually any combination of up to six of these peripherals.

Disk Maestro 6.0 is compatible with PC/MS DOS 3.x, 4.0 or 5.0 and includes support of Microsoft's Windows 3.0. It also supports Compaq DOS 3.31. SCSI disks which were partitioned with previous versions of Disk Maestro's FDFDISK or RMFORMAT are completely compatible with this version of the product. Disk Maestro also supports logical drives greater than 32 megabytes in an extended DOS partition, breaking the barrier imposed by earlier versions of DOS 3.x, allowing volume capacities to be from 1 to 511 megabytes on a single loaded drive. A key feature of Disk Maestro 6.0 is that it allows media interchangeability between DOS 3.x and 4.0 for disk partitions larger than 32 megabytes and up to a capacity of 511 megabytes. Thus, data written under these different versions of DOS may be shared between users when Disk Maestro 6.0 is installed.

This software is available on 3.5-inch and 5.25-inch diskettes, including diagnostic, partitioning and formatting utilities and documentation. In the United States of America the product is currently listed at $70. Disk Maestro is also available with all Future Domain DOS and DNK kits. List price for these kits starts at $135 and $162, respectively.

United Kingdom prices are likely to mirror these figures - £70, £135 and £162 respectively. For further information on the company and its products, contact: Laura Wells, Future Domain Corporation, 2801 McGaw Avenue, Irvine, CA 92714. Telephone: (714) 253-0400.

CALENDAR UPDATE

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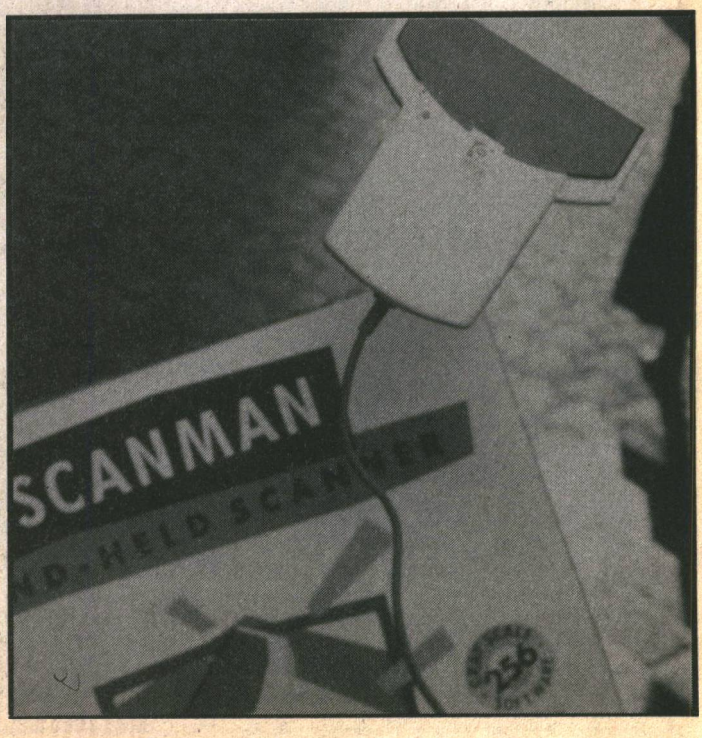
May 10-12th
The Computer Shopper Show
Alexandra Palace
London
Blenheim Online: 081-868-4466

LOGITECH NEWS

ScanMan Model 32 is Logitech's new entry level hand-held scanner for IBM PCs and compatibles. This new product will replace the company's award-winning ScanMan Plus when it goes on sale in early May priced at £129 plus VAT. ScanMan Model 32 comes complete with GrayTouch, a breakthrough scanning and editing software packages that provides 32 true grey levels for professional quality grey scale images.

Scanned images can be saved in a variety of file formats - IMG, TIFF (including LZW and compressed bit) or PCX. Three advanced halftone printing options provide the optimum output for scanned images, while extended memory support offers the solution where the image size exceeds the RAM capacity of the user's system.

When teamed up with Catchword, Logitech's Optical Character Recognition (OCR) software, ScanMan Model 32 provides unrivalled results when scanning text and transforming it into ASCII format. Further details are available from LOGI (UK) Ltd. Tel: 0753-37222.



PRIZE DRAWS

Mr G. Beaton of Winscombe, Avon, has won the **Onside** sideways printer utility disk we reported on in issue 136. While Ms. Julia Wilson of Prudhoe, Northumberland wins the **Calfacts** and **Dos Summary** disks reported in issue 137.

These discs were kindly donated by The Public Domain Software Library in Sussex. Tel: 0892-663298.

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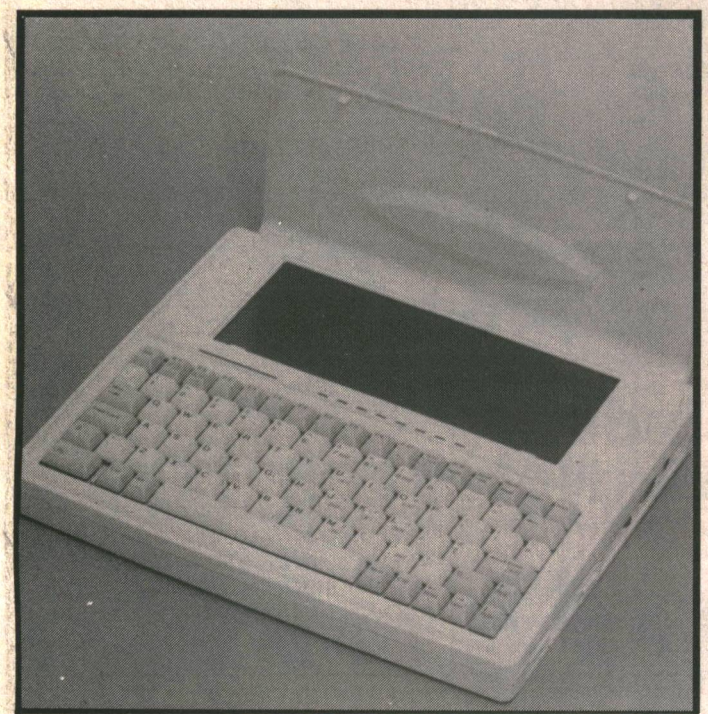


The Reeves Hyperbook 1000

The latest notebook computer - the fastest, most powerful, compact and versatile in its price range - has it seems, been recently launched onto the UK market. At £699 plus VAT the Reeves HyperBook 1000 breaks new ground, bringing together for the first time a portable machine with the power and a built-in level of equipment equivalent to that of a desk-top, while being no more expensive.

The HyperBook 1000 weighs just 5.7lb and is 12 inches wide, 10.7 inches deep by 1.9 inches high. Although a lightweight in design, it is a heavyweight performance. It is fast, with an operating speed of close on 10MHz - a standard 640K RAM memory effectively provides the "engine room" of the machine.

The Reeves Hyperbook 1000 is the first in this particular price range and size to offer two in-built storage devices - a 'state of the art' 2.5 inch 20Mb hard disc and a 1.44 Megabyte 3.5 inch floppy disc drive.

Another unique feature is its four power sources. The HyperBook 1000 can run for over six hours on its NiCad rechargeable batteries. These can be replaced with normal long-life alkaline "C Type" batteries. Alternatively, it can run and be recharged from the mains or from a car battery.

Managing Director Richard Reeves says: "It does everything an XT can do, but you can tuck it away in your office drawer or pop in into your briefcase, take it away and use it anywhere. And at the same price as an XT..."

The PC is ideal as a word-processor and will run all popular word-processing packages in its class, such as WordStar or WordPerfect. It can also be used for a full range of accounting functions, including spreadsheets, databases etc.

In addition to its built-in features, the HyperBook 1000 offers ports for connecting a dot matrix or laser printer; a second external, floppy disc drive; and a colour monitor. The computer can also be linked to a fax/modem via a nine-pin serial port *(which will also take a mouse or bar-code reader).*

The computer is available with floppy disc only at £449.00 or with the built-in hard and disc drives at £699 (Add VAT at 17.5% to all these prices). Further information from: Reeves Plc, 1/2 Pennard Close, Brackmills Business Park, Northampton. NN14 0BE. Tel: 0604-700812.

SOFTWARE GUIDES

America's leading software reference guides arrive in the UK - The Computer Reference Company, widely known in the UK for their Wheel-Ease guides, has been appointed UK distributor for the Microref range of keyboard templates, developed by Educational Systems, Inc, of Northbrook, Illinois. Microref's templates are rated Number One in the USA by such leading figures as John C Dvorak of the renowned PC Magazine.

Each template is organised functionally, to match the way users think and work. The main templates sits along the top of the keyboard, and is held in place with secure mounting clips. For those who use keyboard macros in their works, there's even a space to write in additional notes - and it's wipe-clean, so changes can easily be made to the user's own notes at any required time.

Microref keyboard templates are available for a wide range of applications packages, and retail at £8.95 exclusive of VAT.

For further details contact: Michael Malone, Managing Director, on 061-624-5662. Fax: 061-627- 2047.

NEW VGA CARD

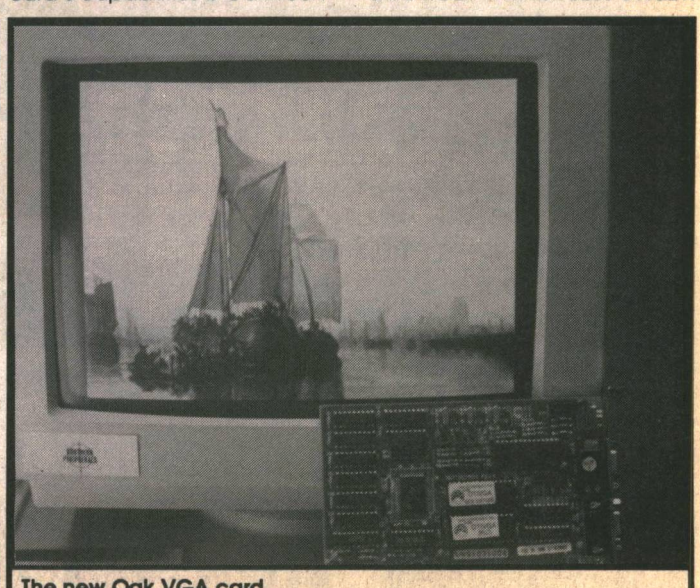
Southern Peripherals is announcing the launch of the OAK VGA display card, a medium resolution display adaptor for the IBM PS2 model 25/30, and the PC/AT/XT and compatibles. It has more functions than a standard IBM VGA adaptor and being fully compatible with the IBM BIOS, it is also downwards compatible with MDA, monochrome Hercules, CGA and EGA standards.

The Oak VGA Card comes with an installation disc and drivers for a variety of widely used applicational packages including Windows 3.0, Lotus 1-2-3 version 2, Framework II and III, Wordperfect 5.0 and 5.1, Ventura V1.1 and Autocad.

At the heart of the four layer card's capabilities is Oak Technologies OTI-037 chip set which operates at 35.5MHz and supports high resolution graphics modes with up to 800 x 600 pixels in colour, for variable frequency monitors.

When used with analogue monitors, the 256 colour graphics mode can display 256 out 256,000 colours simultaneously through an external colour palette - pretty impressive!

The Oak VGA card can run analogue or digital TTL monitors. It has a 15-pin connector to cater for the former, and a 9-pin DB-9 or DE-9 cable connector for the latter. For further information please contact Derek Southern or Richard Etheridge at Southern Peripherals, 17C London Street, Basingstoke, Hampshire RG21 1NT. Tel: 0256-819221.



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ST 1144A	IDE	124Mb	19ms	£295.00
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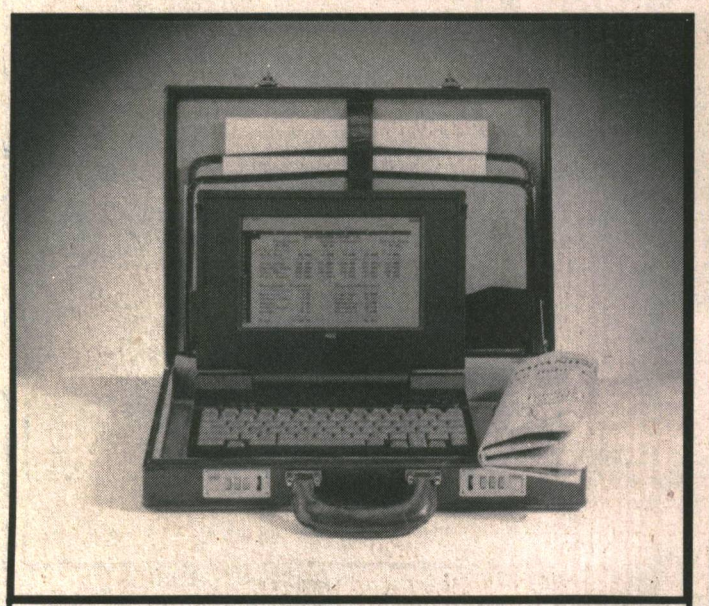
NEC FIRST



NEC's Ultralite 286F

NEC (UK) Ltd has recently launched it's first notebook laptop computer in the UK. The **Ultralite 286F** offers full functionality and power for standard desktop applications at a competitive price. This machine is equipped with an Intel 80286 chip running at 12MHz. Remarkably the overall dimensions of the Ultralite 286F are only 8.5" by 11.5" by 2.0" deep - slighter smaller in footprint, than A4 paper. The weight is also remarkably low at only 6lbs.

This machine is comprehensively fitted with a 20Mb hard disk, an internal 3.5" floppy drive, 1Mb of RAM *(expandable to 5MB)*, a full 78-key keyboard with 12 function keys and separate cursor control keys is also provided. Display is provided courtesy of a black and white, backlit, LCD screen with 640 x 400 double scan CGA resolution which provides easy-to-read high contrast characters.

Communications capabilities are covered by the inclusion of a modem I/O slot, plus an additional I/O slot for dedicated high speed memory and I/O ports for serial and parallel connection. There is also a connector for an external floppy drive.

Battery power is reputed to be up to three hours of continuous use, and recharging can take place in only 3.5 hours.

The Ultralite 286F is sold complete with case, MS-DOS, AC adaptor and battery for £1,795 - further details on this machine are available from NEC (UK) Ltd. Tel: 081-993-8111.

MINITEL COMMS

The projected results for Minitel that have just been released for 1990 show a growing interest in Minitel from many European counties. Calls from outside of France (Britain, Italy, Spain and Germany) reached 140,000 hours up from virtually nothing in 1989. Here in the UK there are two major groups of users using Minitel on a regular basis: education establishments and commercial users. At the BETT '91 show (British Educational Technology Training) in London, Aldoda International exhibited the simplicity and ease with which one can connect a PC computer to the French Minitel by using a local data network service at a price of approximately 8 pence per minute. Minitel is the French computerised information system - accessible by using a terminal and a telephone line - that 5.6 million homes and offices in France used to make ONE AND A HALF BILLION calls and 100 million hours in 1990. For more information contact Aldoda International Ltd. Tel: 071-586-5686.

WORLD'S SMALLEST?

Amstrad already seems set to lose its claim to be the manufacturer of the world's smallest PC - announced at CeBIT - thanks to a new machine to be launched at the Spring Computer Shopper Show. The latest entry for the title is called the **Tiny Tim** and comes from a new name on the PC scene - the Tiny Computer Company.

Visitors to the Computer Shopper Show - which opens at Alexandra Palace on May 10TH - will be the first to discover The Tiny which boasts a CPU which is smaller than a standard sized floppy disc drive.

While details of the machine are still scarce, it is reported to be available in both hard and floppy versions with an 81-key keyboard. Also using the show as a launchpad will be Austin with a new range of PC systems. These will include the First Station, a 386SX machine which comes complete with 1Mb ram, 640k memory, 44Mb hard disc, DOS 4.01, Paradise VGA videocard and mono monitor. A 286 version will also be unveiled, as will a series of notebook PCs.

Greater emphasis has been placed on the PC sector at Spring Shopper '91 following market research findings at the December 1990 show. These revealed that a surprising 65 per cent of visitors were existing or potential PC users. A series of workshops by top business software houses will also be a major feature of the show.

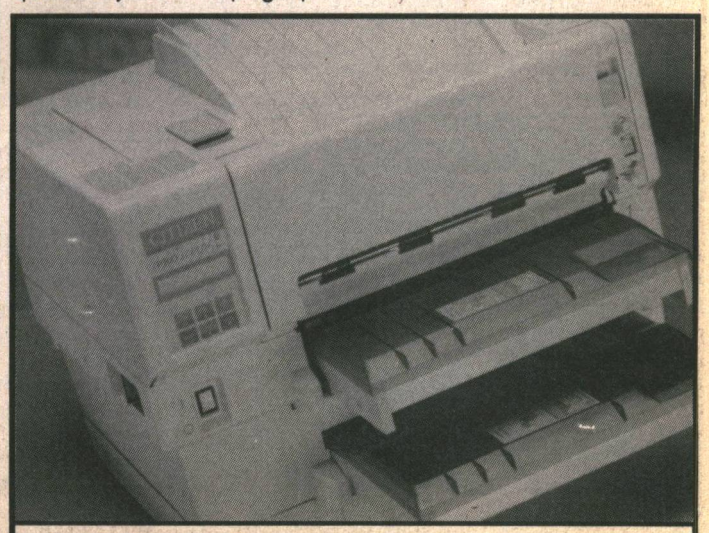
Another special area will be the Business Village offering continuous rolling demonstrations of the latest PCs. "Computer Shopper is increasingly being seen as a truly important event for the PC market", says Stephen Bozdan, marketing director of Blenheim Database Exhibitions, the show organisers. "The fact that it has been chosen as the launch pad for a potential worldbeater like The Tiny is a further major endorsement of this".

CITIZEN LASER

Citizen Europe have made significant moves within their professional laser range by unveiling a new, powerful DTP laser printer - their ProScript 12 is a high performance Postscript compatible machine, capable of handling the most complex of publishing tasks directly from the computer users desktop.

The ProScript 12 supports a resident Postscript compatible board. Printing speeds are quoted at just over 11 pages per minute. A wide variety of built-in emulations including HP Laserjet II, IBM Proprinter II, Epson FX80, Diablo 630 and HPGL, make the ProScript 12 extremely software-flexible, allowing the printer to be used in conjunction with almost all popular software. Standard parallel and serial interfaces provide wide reaching hardware compatibility.

For further information contact Trish Elkins of Citizen Europe Ltd. On 0895-72621.



Citizen's ProScript 12

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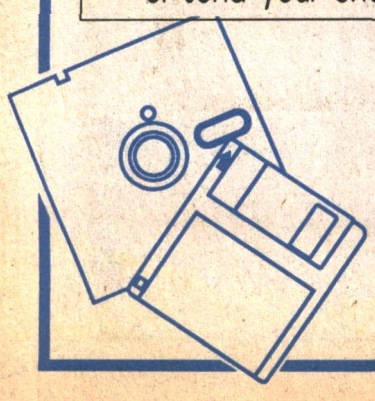

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P3/P7	£4.00	£3.70	£3.20
P5/P5XL/P9XL	£3.70	£3.40	£3.10
P6+/P7+/P60/P70 FA	£4.10	£3.80	£3.50
P6+/P7+/P60/P70 MS	£9.00	£8.60	£8.20
P6+/P7+/P60/P70 Col.	£13.50	£13.00	£12.50
SPIN 5500/7700 FA	£2.15	£2.05	£1.80
SPIN 5500/7700 MS	£2.10	£1.95	£1.70
OKI			
80/82/83/92/93	£1.15	£1.05	£0.95
182/183/192/193	£3.70	£3.40	£3.10
320/321	£3.70	£3.40	£3.10
390/391	£6.50	£6.00	£5.50
OKIMATE 20 Black	£6.00	£5.60	£5.20
OKIMATE 20 Colour	£6.40	£6.00	£5.60

	2+	6+	12+
PANASONIC			
KXP1080/81/82/83	£3.35	£3.10	£2.85
KXP 1124/1180	£5.00	£4.50	£4.00
KXP 3131/3151	See Diablo Hytype II		
KXP1540	£6.00	£5.50	£5.00
KXP1592/1595/1695	£3.35	£3.10	£2.85
KXP1624	£7.50	£7.00	£6.50
QUME			
Sprint 7/9/10/IV MS	£2.50	£2.20	£2.00
Sprint 7/9/10/IV FA	£3.25	£3.00	£2.70
RITEMAN			
INFORUNNER/+/B+	£6.00	£5.50	£5.00
RICOH			
1300/1600 MS	£2.50	£2.40	£2.20
SEIKOSHA			
GP500/550	£2.30	£2.10	£1.90
SP800/1000/2000 MS	£3.50	£3.30	£2.80
SP800/1000/2000 FA	£3.00	£2.80	£2.50
SP800/1000/2000 B/R	£3.75	£3.50	£3.25
SHINWA			
CP80 MS	£2.45	£2.20	£2.00
CP80 FA	£3.55	£3.30	£3.00
SMITH CORONA			
D100/D200	£4.60	£4.20	£3.80
D300	£2.50	£2.40	£2.20
EL1000/TP1 FA	£5.70	£5.25	£4.95
EL1000/TP1 CO	£5.00	£4.70	£4.50
FASTEX 80	£11.70	£11.20	£10.90
SILVER REED			
EXP400/500/550 MS	£3.00	£2.85	£2.65
EXP400/500/550 CO	£2.80	£2.60	£2.40
STAR			
DP510/DP515	£1.15	£1.05	£0.95
GEMINI 10X/SG10/15	£1.15	£1.05	£0.95
LC10/LC10 II/NX1000	£2.50	£2.35	£2.10
LC10 Colour/Rainbow	£6.00	£5.50	£5.00
LC15/FR10/FR15	£2.50	£2.40	£2.25
LC200	£6.00	£5.50	£5.00
LC200 Colour	£11.00	£10.00	£9.00
LC2410/LC2415	£2.50	£2.40	£2.25
NB24-10	£4.10	£3.70	£3.45
NB24-15/NB-15	£4.50	£4.15	£3.85
ND10/NL10/NR10	£3.60	£3.25	£3.00
ND15/NR15/NX15	£4.00	£3.65	£3.40
POWERTYPE	See Diablo Hytype II		
RADIX 15	£4.00	£3.60	£3.30
XB2410/XB2415	£2.50	£2.40	£2.25
XB2410/XB2415 Colour	£13.00	£12.00	£11.00
TOSHIBA			
EXPRESSWTR 301 5 Pack	£25.00	£23.00	£21.00

CO = Correctable
FA = Fabric
MS = Multi-strike
SS = Single-strike
B/R = Blue or Red please specify

BULK DISKS

	20	50	100	250
3.5" D/sided D/density	£12.00	£25.00	£45.00	£110.00
3.5" D/sided H/density 1.44Mb	£20.00	£47.00	£90.00	£215.00
5.25" SS/DD DS/DD DS/QD	£5.00	£11.00	£20.00	£48.00
5.25" D/sided H/density 1.6Mb	£11.00	£22.00	£38.00	£93.00

All 3.5" disks complete with labels. All 5.25" disks complete with envelopes, labels and write protect tabs.

FLOPPY DISKS BOXES OF 10 DISKS

		1–2	3–9	10–20	21+
3M					
MD-2DD 3.5"	D/Sided D/Density	£7.50	£7.20	£7.00	£6.50
MD-2HD 3.5"	D/Sided H/Density 1.44Mb	£19.00	£16.50	£14.50	£14.00
MD-2D 5.25"	D/Sided D/Density 40TR	£5.30	£5.00	£4.60	£4.30
MD-2DD 5.25"	D/Sided Q/Density 80TR	£8.50	£7.70	£7.30	£7.10
MD-2HD 5.25"	D/Sided H/Density 1.6Mb	£8.50	£8.00	£7.50	£7.20
DYSAN					
MD-2DD 3.5"	D/Sided D/Density	£7.30	£7.10	£6.90	£6.40
MD-2D 5.25"	D/Sided D/Density 40TR	£5.20	£4.90	£4.50	£4.20
SONY					
MD-2DD 3.5"	D/Sided D/Density	£7.50	£7.20	£6.90	£6.40
MD-2HD 3.5"	D/Sided H/Density 1.44Mb	£17.00	£16.00	£14.00	£13.00
TDK					
MD-2DD 3.5"	D/Sided D/Density	£6.00	£5.90	£5.70	£5.50
MD-2HD 3.5"	D/Sided H/Density 1.44Mb	£12.00	£11.50	£11.00	£10.00
MD-2D 5.25"	D/Sided D/Density 40TR	£4.70	£4.50	£4.20	£4.00
MD-2HD 5.25"	D/Sided H/Density 1.6Mb	£7.30	£7.00	£6.70	£6.50
VERBATIM					
MD-2DD 3.5"	D/Sided D/Density	£7.30	£6.90	£6.50	£6.00
MD-2HD 3.5"	D/Sided H/Density 1.44Mb	£17.00	£16.00	£14.00	£13.00
MD-2D 5.25"	D/Sided D/Density 40TR	£5.20	£4.90	£4.50	£4.20
MD-2DD 5.25"	D/Sided Q/Density 80TR	£8.30	£7.80	£7.30	£7.00
MD-2HD 5.25"	D/Sided H/Density 1.6Mb	£8.40	£7.90	£7.40	£7.10
3.5" Labels 1000 per roll		£8.50			
3.5" Disk head cleaner with fluid		£2.90			
5.25" Disk head cleaner with fluid		£2.70			

MAXELL 3"

CF2 5 Disks £1.80 Each £9.00 Pack CF2 20 Disks £1.60 Each £32.00 Pack
CF2 10 Disks £1.70 Each £17.00 Pack CF2 50 Disks £1.50 Each £75.00 Pack

All 3.5" disks complete with labels. All 5.25" disks complete with envelopes, labels and write protect tabs.

DISK STORAGE

DISK LIBRARY BOXES	1–9	10+
3.5" Clear front plastic library box holding 10 disks	£1.50	£1.25
3.5" Solid plastic library box holding 10 disks	£1.90	£1.50
5.25" Clear front library box holding 10 disks	£1.50	£1.25
5.25" Solid plastic library box holding 10 disks	£1.90	£1.50

LASER TONER CARTRIDGES

EPSON GQ/OKI	£15	KYOCERA 2 PACK	£38
EPSON GQ/OKI OPC DRUM	£96	KYOCERA F-800/F-1800	£25
EPSON GQ/OKI CLEAN KIT	£53	M/TALLY MT905	£24
EPSON EPL	£109	NEC S60/S60P	£79
HP/CANON MK1 (EP)	£55	NEC 266/290	£89
HP/CANON MKII (EPS)	£55	NEC LC890XL	£15
HPIIP/CANON 4 (EPL)	£55	PANASONIC KXP4420	£25
IBM 4019E	£149	PANASONIC KXP4450/55	£25
IBM 4019	£119	QUME CRYS/PRINT 3 PACK	£56

PRINTER STATIONERY

SIZE	GSM	QUANTITY	1 BOX	2 BOXES
11 x 9.5MP	60	1000	£9.00	£8.50
11 x 9.5MP	60	2000	£15.00	£14.00
11 x 9.5MP	70	1000	£12.00	£11.00
11 x 9.5MP	70	2000	£18.00	£17.00
EXACT A4MP	70	1000	£13.00	£12.00
EXACT A4MP	70	2000	£22.00	£20.00
EXACT A4MP	90	1000	£15.00	£13.00
11 x 14.5	60	2000	£20.00	£18.00
11 x 14.5	70	2000	£22.00	£20.00

MP = PLAIN WHITE MICRO-PERFORATED EDGES

FACSIMILE ROLLS

	Price Per Box	1 Box	2 Boxes	5 Boxes
AMSTRAD FX5000/ 9600T/AT	10 Pack	£36.00	£30.00	£26.00
210 x 30 x 12.5	12 Pack	£60.00	£54.00	£48.00
210 x 50 x 25	12 Pack	£96.00	£90.00	£84.00
210 x 100 x 25	6 Pack	£78.00	£72.00	£66.00
210 x 100 x 50	6 Pack	£78.00	£72.00	£66.00
216 x 30 x 12.5	12 Pack	£78.00	£72.00	£66.00
216 x 100 x 25	6 Pack	£75.00	£69.00	£63.00
216 x 100 x 50	6 Pack	£75.00	£69.00	£63.00
257 x 100 x 25	6 Pack	£102.00	£96.00	£92.00
257 x 100 x 50	6 Pack	£108.00	£102.00	£96.00

Check for compatibility of Fax machine before ordering.

ENVELOPES

Style	Self Seal or Gummed	Price per box of 1000 1 Box	5 Boxes	10 Boxes
4¼" x 8⅝" Plain	Gummed	£20.00	£15.00	£12.00
4¼" x 8⅝" Plain	Self Seal	£21.00	£16.00	£13.00
4¼" x 8⅝" Window	Gummed	£23.00	£17.00	£14.00
4¼" x 8⅝" Window	Self Seal	£24.00	£18.00	£15.00

MISCELLANEOUS

SPACEMATE DESK	£109.00
KEYBOARD DRAWERS	
For PC/XT Keyboard 23¾"H x 20"W x 9½"D	£20.00
For PC/XT Keyboard 23¾"H x 22"W x 9½"D	£22.00
PRINTER STANDS	
80 Column printer stand feeds and refolds paper underneath	£21.00
132 Column printer stand feeds and refolds paper underneath	£24.00
MONITOR STANDS	
14" Monitor stand, 25° tilt and 360° turn	£8.00
14" Monitor stand, 25° tilt and 360° turn with front control gliding knob	£13.00
MOUSE MAT	
Mouse pad size 270 x 220 x 6mm in Grey, Blue or Red	£2.70
COPY HOLDER	
Fixed arm copy holder	£9.00
Adjustable arm copy holder	£14.00

PRINTER CABLES

Amstrad CPC	£10.00
BBC/BBC Master	£10.00
BBC Master Compact	£15.00
IBM 2 Metre Parallel	£5.00
IBM 3 Metre Parallel	£6.90
IBM 5 Metre Parallel	£9.00
IBM 10 Metre Parallel	£15.00
IBM 36-36 2 Metre	£9.00
IBM 36-36 3 Metre	£12.00
IBM 36-36 5 Metre	£17.00
IBM 36-36 10 Metre	£25.00
IBM XT 25 Pin 2 Metre Serial	£9.00
IBM AT 9 Pin 2 Metre Serial	£9.00

MODEM CABLES

IBM 25-25 Modem Cable	£14.00
IBM 9-25 Modem Cable	£14.00

PRINTER SWITCH BOXES

1 in 2 out Manual Parallel or Serial	£12.00
1 in 3 out Manual Parallel or Serial	£15.00
1 in 4 out Manual Parallel or Serial	£18.00
2 in 2 out Crossover Parallel or Serial	£18.00
1 in 2 out Auto Parallel or Serial	£59.00
1 in 4 out Auto Parallel or Serial	£69.00

LOCKABLE DISK BOXES

MODEL	SIZE	CAP.	1–9	10+
YU40L	3.5"	40	£5.50	£5.00
YU80L	3.5"	80	£6.00	£5.50
YU100L	3.5"	100	£7.00	£6.50
DD50L	5.25"	50	£5.00	£4.50
DD100L	5.25"	100	£6.00	£5.50

DATA CARTRIDGES

	1–5	6–9	10+
DC1000	£11.50	£11.00	£10.00
DC2000	£14.00	£13.50	£13.00
DC2120	£16.50	£16.00	£15.50
DC600A	£13.50	£13.40	£13.30
DC6150	£15.00	£14.90	£14.80

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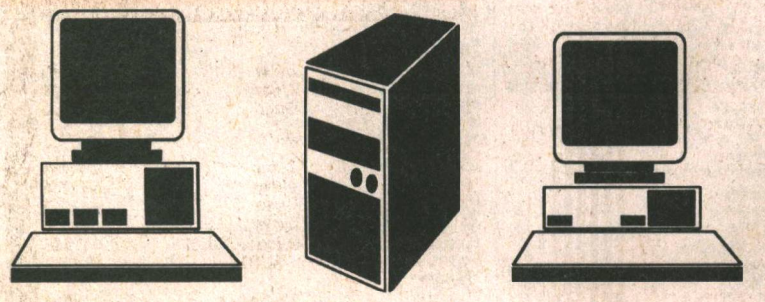

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386/33 cache	£1399
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Extra floppy drive	£50
Extra ram - per megabyte	£45
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DR-DOS	£45
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LBS

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CIS BRANDED DISKS IN PLASTIC CASE

		Per case of 10
5.25"	DS/DD 48 TPI	£7.50
	DS/DD 96 TPI	£8.50
	DS/HD 96 TPI	£12.50
3.5"	DS/HD (2MB)	£20.00
3.5"	DS/DD 135TPI (cardboard box of 10)	£7.50

DS/DD 5¼" DISKS IN BOXES

25 Disks in 50 capacity bank with lock	£12.45
50 Disks in 100 capacity bank with lock	£18.95
70 Disks in 100 capacity bank with lock	£24.75

CIS BRANDED BULK DISKS

150 DS/DD 48TP1	£45.00
300 DS/DD 48TP1	£88.50
600 DS/DD 48TP1	£171.00
900 DS/DD 48TP1	£247.50

3½" DISKS IN BOXES

25 DS/DD DISKS IN 40 CAPACITY BANK WITH LOCK	£18.95
50 DS/DD DISKS IN 80 CAPACITY BANK WITH LOCK	£29.95
25 DS/HD DISKS IN 40 CAPACITY BANK WITH LOCK	£34.95
50 DS/HD DISKS IN 80 CAPACITY BANK WITH LOCK	£59.95

CLEANING KITS

Cleaning disk plus cleaning fluid

3.5" Disk	£3.50
5.25" Disk	£2.75

KEYBOARDS AND PC CASES

Keyboard, PC/XT/AT, 102 keys	£49.95
PC Case, PC/XT/AT, 4 slots, 1Hard & 3 Floppy	£49.95
Power Supply Unit, 200 watts	£54.95

MONITOR STANDS

25 Deg Tilt 360 deg swivel

For 12" monitors	£10.95
For 14" monitors	£12.95

KEYBOARD DRAWERS

Metal frame, PC/XT/AT	£29.95

PC/XT/AT COMPATIBLE JOYSTICKS

AK-GC27A

Auto centering free floating & fine tuning 2 momentary fire/ graphics switches on top panel & one on control stick, auto fire £19.95

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Gender Changers: (Standard)	
9M-9M	£4.95
9F-9F	£4.95
25M-25M	£5.95
25F-25F	£5.95
36M-36M	£7.95
36F-36F	£7.95
Gender Changers: (Mini Version)	
9M-9M	£5.15
9F-9F	£5.15
25M-25M	£6.15
25F-25F	£6.15
36M-36M	£8.25
36F-36F	£8.25
Adaptors:	
9M-9F	£4.95
9F-15M VGA ADAPTOR	£5.75
9F-15F	£4.95
9M-15F	£4.95
9F-25F	£5.95
9M-25F	£5.95
9F-25M	£5.95
25M-36F	£6.45
25F-36M	£6.45
PS/2 KEYBOARD ADAPTOR	£4.95
PS/2 ADAPTOR, DB9M - MINI DIN 6 PIN	£8.95

MOUSE SETS & MATS

GM-6000 with Dr. Genius, Software, Genius Menumaker, Genius Menu Library, 3 User Manuals, Mouse Pocket, Mouse Pad, 9-25 Pin adaptor £32.95

GM-F302 Dynamic Resolution 350-1050 DPI X-Y movements with precise controls, auto-mode detection of 2 or 3 button operation. Inclusive of software, mouse pad, mouse pocket, etc £39.95

GM-F303 includes all the features and thecomplete package as the GM-F302, however this mouse also includes the PS-2 adaptor and CAS/CAD software £42.95

Mouse Mats - 6mm, Neoprene £4.95

TRACKBALL

Anko Trackball, Fingertip control, Revolutionary 4th "Drag" Button to lock for continuous drawing operation. Popup Menu, Mouse System & Microsoft compatible. Connect directly to RS232 port. No external power required. Proven Optomechanical hardware including Dr Halo III £49.95

FLOPPY DISK DRIVES

INTERNAL DRIVES

NEC 1037A 3.5 Floppy drive, 720k, with 5 1/4" mounting frame and power cord and cable £69.95

Teac 3.5" floppy drive, 1.44MB with 51/4" mounting frame, power cord and cable £79.95

EXTERNAL DRIVES

Drive Size	Computer	
3 1/2", 720K	IBM/COMPATIBLES	£70.00
3 1/2", 1.44MB	"	£80.00
5 1/4", 360K	"	£75.00
5 1/4", 1.2MB	"	£85.00
3 1/2", 880KB	AMIGA, 500, 1000, 2000	£45.00
3 1/2", 720K	AMSTRAD, 1512, 1640	£58.00
5 1/4", 360K	AMSTRAD, PC 2000 SERIES	£59.00
5 1/4", 1.2MB	AMSTRAD, PC 2000 SERIES	£69.00
51/4", 1.2MB	AMSTRAD, LAPTOP	£80.00
5 1/4", 360K	LAPTOP- TOSHIBA, SHARP, ETC	£70.00
5 1/4", 1.2MB	"	£80.00

ADD-ON CARDS

PC/XT Motherboard, Ultra-high speed, V20 microprocessor, switchable between 4.77 & 12MHz, on board memory expandable to 1MB, parity check enable/disable, & expansion slots unpolulated £79.95

PC/AT Motherboard, 80286-10 chip, 10/12Mhz CPU, 6/8/10/ 12MHz hardware & software selectable, 0 wait/1 wait switchable RAM access times, maximum 4MB on board memory, expandable to 16MB in protected virtual address mode, rechargeable battery supported CMOS clock & calendar circuit, 3 programmable timers, 8 expansion slots unpopulated £149.95

Joystick game card with 2 ports	£16.00
Colour Graphics Printer Card	£35.95
Monochrome Graphics Printer Card (TD 3088A)	£35.95
Mono/Colour Graphics Printer Card	£49.95
Monochrome Graphics Adaptor	£39.95
MGP card with bus mouse port	£49.95
HDD PC/XT, Interleave 4:1, 8 bit (MFM Drives)	£67.50
HDD PC/XT, Interleave 3:1, 8 bit (MFM Drives)	£69.50
HDD PC/AT, Interleave 1:1, 16 bit (MFM Drives)	£109.50
HDD PC/AT, Interleave 2;1, 16 bit (MFM Drives)	£99.95
HDD/FDD PC/AT, Interleave 1:1, 16 bit, 2 hard disks 20/40MB, 2 floppy disks, 360K/720K/1.2MB/1.44MB	£126.95
HDD/FDD PC/AT, Interleave 2:1, 16 bit, 2 hard disks 20/40MB, IDE Interface Card, 2HDD/2FDD	£34.95
2 floppy disks 360K/720K/1.2MB/1.44MB	£103.95
Floppy disk controller (PC/XT)	£17.95
Floppy disk controller (PC/AT)	£28.45
Floppy disk controller (PC/XT/AT) (4 Drives) 360K/720K/1.2M/1.44M with cables	£39.95
RS 232 (PC/XT) 1 Port	£16.95
RS 232 (PC/XT) 2 Ports	£24.95
RS 232 (PC/AT) 1 Port	£19.95
RS 232 (PC/AT) 2 Ports	£27.95
1 Serial/1 Parallel (PC/XT/AT)	£28.95
2 Serial/1 Parallel (PC/XT/AT)	£37.95
2 Serial/2 Parallel (PC/XT/AT	£39.95
Parallel Port Printer Card	£12.95
Multi 1/0 PC/XT, 2 Drives, 2 RS232 1 option, 1 Parallel, Game, Clock, Calendar	£47.95
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RAM EXT/EXP PC/XT Card, 576KB (Unpopulated)	£59.95
RAM EXT/EXP PC/AT Card, 2MB (Unpopulated)	£94.95
RAM EXT/EXP PC/AT Card, 8MB (Unpopulated)	£164.95
Printer Buffer Card, Expandable up to 512K, unpopulated	£110.00

DRAMS

4164 - 120NS	£1.92
4164 - 100NS	£1.92
41464 - 100NS	£2.40
41256 - 120NS	£2.40
41256 - 100NS	£2.40
414256 - 100NS	£5.40
411000 - 100NS	£5.40
411000 - 80NS	£6.00

MONITORS SCREEN FILTERS

12" Monitor -	M12 Monochrome	£10.95
	C12 Colour	£12.95
14" Monitor -	M14 Monochrome	£12.95
	C14 Colour	£14.95

DATA SWITCH BOXES

MANUAL

Serial:		
DSA-25-2	2 Way	£16.95
DSA-25-4	4 Way	£21.95
DSA-25-X	Cross	£22.95
Parallel:		
DSA-36-2	2 Way	£17.95
DSA-36-4	4 Way	£22.95
DSA-36-X	Cross	£23.95
Compact Data Switch, 2 Centronics-1 RS232		£22.95
Compact Data Switch, 1 Centronics-2RS232		£21.95

AUTO

Serial:		
MS201A	2 in-1 out	£42.95
MS-401	4 in-1 out	£79.95
MS-801	8 in-1 out	£99.95
Parallel:		
MP-201A	2 in-1 out	£44.95
MP-401	4 in-1 out	£79.95
MP-801	8 in-1 out	£99.95
PP-212 Dual Way	2 in-1 out/1 in-2 out	£59.95
MP-402	4 in-2 out	£99.95

DATA SWITCHES WITH BUFFER

PB-54-2	2 in-1 out, with 64K buffer	£99.95
PB-256-2	2 in-1 out, with 256K buffer	£139.95

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DISCOVERY 2400PM POCKET MODEM
Bell 103/212A CCITT V. 21, V. 22, V. 22bis compatible
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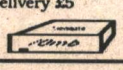

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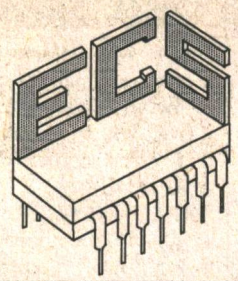

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By Mark Caro

With the increased popularity of the Commodore Amiga, and this machine being my favourite of all, I have introduced the Commodore Column to Micro Computer Mart. From here on this will be a regular feature within the magazine with all aspects of Commodore *(not just the Amiga)* being explored and reported on.

In the column we will be reporting on new products for Commodore, reviewing hardware and software, as well as giving you regular news reports. Articles sent in from you are always welcome, so feel free to send me information, reviews, news items etc.

Commodore News

AMIGA 3000/UX

Commodore have recently announced that an Amiga 3000 running Unix System 5 release 4 has been launched. This represents Commodore Business Machines (UK) Ltd first move into the open systems arena.

The Amiga 3000/UX is a workstation designed for the business and professional user, capable of handling sophisticated applications whilst benefiting from the open communication that Unix allows.

A powerful machine, it includes a 25-Mhz MC68030, a maths co-processor, 8Mb of RAM, a very fast 19ms 100Mb SCSI drive with an optional 200Mb, as well as parallel and serial ports along with network software are all part of the configuration.

AMIGA 3500

The latest addition to the Commodore Amiga range of workstations is the Amiga 3500, previewed at the Business Computing Show. CADCAM, DTP, storyboards, graphics, animation and video along with hi-fi sound are the key application areas for the Amiga 3500 MC68030 processor system.

The Amiga 3500 is an advanced, high-speed personal computer housed in a floor standing cabinet. Incorporating a high speed microprocessor, a numeric co-processor, 5Mb of memory expandable to 18Mb and additional input and output features make this a fast, versatile and powerful computer. Commodore has included additional features as standard in the A3500 configuration, for example, a SCSI controller and a built in enhancer, which produces flicker free screen output in graphic mode.

The Amiga 3500 extends the way Amigas can be used, acting for the first time as a server in networked applications with connectivity to a wide range of terminals, including PCs, other less powerful Amigas, and Unix workstations. It is designed for professional users but retains the traditional ease of use and affordability of the Amiga family.

New C286-LT

Commodore launched its first laptop PC at the Business Computing Show. The C286-LT is a compatible notebook size PC with the power of a Desktop and stylishly designed in an executive grey, non-slip textured casing.

Both the price of £1999 and the weight of the C286-LT at just 3.2 Kg *(7lbs)* provide an attractive option for executives on the move. It has a 20MB hard disk and 1.44MB standard format 3.5" floppy drive to load all the required business applications. An LCD screen provides clear and bright VGA graphics. When back in the office the C286-LT has all the standard peripheral and printer, serial and parallel ports to act as an everyday desktop workstation.

Running off multi-power mains or rechargable batteries the C286-LT can run for two hours continuously or up to six hours using PowerSave shutdown features.

Commodore PC Systems -

Some of the machines available

For this issue I am going give a run down on the various business machines that Commodore has to offer. Hopefully in future issues I will be reviewing some of these machines.

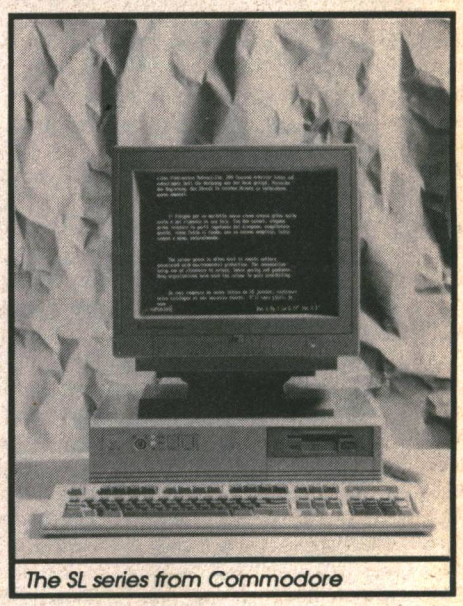
Still available are the basic PC systems from Commodore, the PC10, 20, 35, and 40. The more powerful PCs start at the SL286-16. This uses an 80286 16-Mhz processor *(switchable to 8-Mhz)*, with 1Mb standard expandable to 5Mb on the motherboard via 256 and 1Mb SIMMS and a 80287 co-processor is available also. The system comes with two serial ports, one parallel port, a PS/2 mouse, a 1.44Mb floppy drive and either a 52Mb or 105Mb hard disk. The video controller is a VGA 16-bit with 256Kb video RAM *(expandable to 512Kb)*. There are 3 AT full length slots and 2 XT half length slots inside. A selection of monitors are available from mono to Super VGA. MS-DOS 4.01 is supplied. The SL-386SX 16 is much the same as the 286, running at 16 or 8-Mhz with an 80386SX but also having Shadow Ram support for System Rom and Video Bios. The SL-386SX-20 has the same specifications except it runs at 20-MHz.

The 386DX-25NC is a slightly more powerful machine, running at 25-Mhz. 1Mb of 32-bit RAM is standard, this time expandable to 8Mb. The rest of the system is virtually the same except for having 4 AT full length slots available. The 386-DX-25C is the same but has a 64Kb 25nS cache installed.

The 486-25C is the most powerful of the PC range. This uses a 80486 25-Mhz processor with 4Mb standard, expandable to 8Mb. The processor has an internal 8Kb and a secondary 64Kb 25nS cache on board. A 200Mb drive is also available along with the 4 AT full length slots *(all of which are free)*.

The Amiga 3000/UX *(as mentioned above in the news report)*, is also included in the business range catalogue. It uses the Motorola 68030, 32-bit processor running at 25Mhz. A 32-bit data bus, and a 68882 math coprocessor is also installed.

Memory consists of 4Mb or 8mb fast RAM standard, expandable to 16Mb of fast RAM *(over 1 Gigabyte address space is available)*. Disk storage includes a 3.5" 880K *(formatted)* floppy, with either a 100 or 200Mb 19ms hard drive. These come pre-formatted and already loaded with system software, various utilities, and hard disk drive back up and maintenance utility software.



The SL series from Commodore

The operating systems are Unix System 5 release 4, plus X-Windows system interface and Open Look user interface, as well as the standard AmigaDOS version 2.0. The system comes with 1 serial port and 1 parallel port, keyboard, and 2 mouse/joystick/lightpen ports. The video port is 15.625KHz video *(RGB analog or RGB digital)*, and 31.2KHz de-interlaced or scan-doubled RGB video. Right and left four channel stereo output is standard, reproducing complex waveforms with

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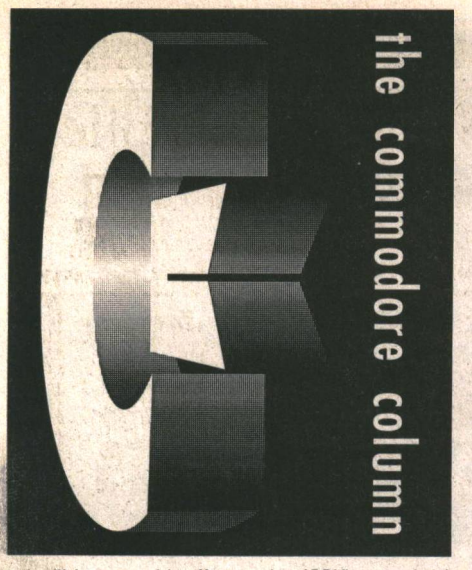

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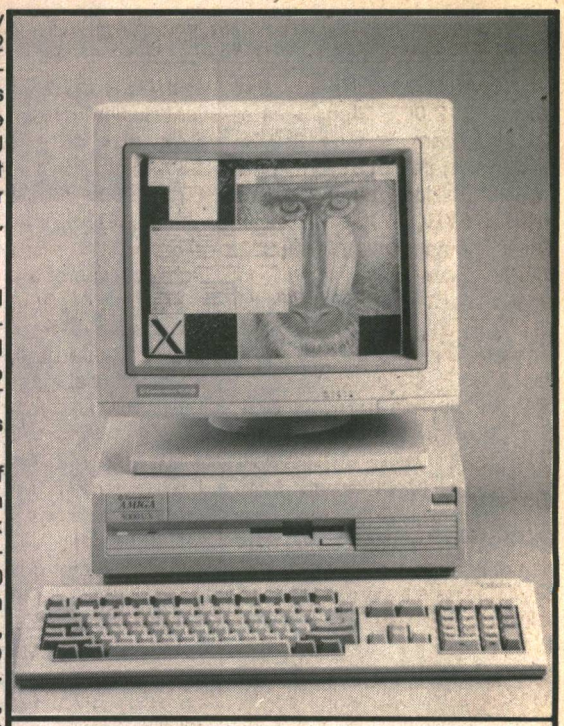
A three button opto-mechanical mouse is included also and a detachable keyboard. Multi-port serial cards and ethernet cards can also be obtained and an Intel 286AT board and high resolution monitors are available as separate items.

A more indepth look into some of these machines will be published in forthcoming issues, as well as a look back into the past with the old Commodore classics such as the VIC 20 and C64. **For further information on the above items contact Andrew Ball, Commodore Business Machines (UK) Ltd, Commodore House, The Switchback, Gardner Road, Maidenhead, Berks SG6 7XA. Tel: 0628-770088. Fax: 0628-71456.**



The AMIGA 3000/UX

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CARTOON MAKER

Mark Caro takes a look at the Cartoon Maker written by J.C.Brown and R.Speed.

There are many animation programs for machines like the Commodore Amiga and the Apple Macintosh, all of which are quite amazing, but there is not much available for the bog standard PC with only a CGA card. Enter Cartoon Maker that even works on a bog standard 8086.

Basically, Cartoon Maker is a set of 4 programs, which used together can produce a working animation on a PC. All you need to run the program is a PC 8086, 286, or 386, with at least 400K of available RAM, a hard disk with approximately 3 MB free, and a CGA or better graphics card *(Hercules is not supported)*. You must also have a Microsoft, or compatible, mouse, or an Amstrad mouse if you use an Amstrad machine. A single floppy disk drive, of either 5.25" or 3.5" format is also required to install the program onto your hard drive system.

Cartoon Maker is quite a powerful tool, once you have got into the workings of it. Don't expect to produce a Disney like cartoon in the first five minutes of using the program, you do have to spend sometime getting used to it, as you do with most complex programs. It is quite possible to produce lengthy animations of several megabytes in length, if you have the disk space. The RAM that you have in your machine only has to be 400K or more, as the animation is compacted and the disk is accessed as needed.

Installation has to be done from in MS-DOS. Unfortunately no installation program is provided, but instructions are given clearly in the manual. All you have to do is create two directories on your 'C:' drive, and copy the contents of each disk into them with the 'COPY A:*.*' command. Once all that is done, you just go into the Cartoon Maker dir and type 'CT', to run the program.

Upon starting the program you are greeted with the Top-level menu. This menu is used to do various things, some of which load in the other programs that you use; Draw, Animate, Smooth, and Playback. Other options on the menu include, Open File, Store File, File Options, Erase File, Text Print, Large File to/from Disk, and Quit. On the menu the current file is also displayed, along with a copyright message from the authors.

The four programs that are used manipulate the different files. Output from one is then used for input to the other etc, so they all work in harmony together. The Draw program handles the .TXT and .DRG files, obviously to do with creating graphics for inclusion in the final animation. The Animate program deals with the .FLM files, creating the animation sequences. The Smooth program converts the .FLM animation files, and the .DRG files into a smoothed out single file renamed to .SMT. This file is the final output from the programs, and can be played back by the Playback program. There is a standalone Play program, so animations can be viewed without having to load Cartoon Maker. This program is free to copy and give to whoever you want.

The first program you run is for the drawing. You are immediately put into a help screen. The drawing program has all the usual options available, circle, rectangle, polygon drawing, as well as fill, and many many more. All drawing is done with the mouse, and the keyboard is used to select different functions. Help screens are provided for complex operations and the manual gives a good description of each command. I really recommend reading the manual before attempting to do anything serious, this is not usually the case for me, I often only read the manual only when something doesn't work, but in this case you do need to read it thoroughly.

The objects you draw on screen can be selected as groups, single items, or backgrounds. These are all used later in the animation program. Objects that are grouped together can have a function performed on all of them together. Several objects may make up a single larger one for example. Once an object is draw it has a label attached to it. This is a little square a few pixels wide. It does not show up on the final output of the animation. It is used to select the different objects and groups, picking them up, moving them around etc.

Tweening

A good feature of the draw program is the tweening function. This allows you to draw two objects that are different and transform them into each other. For example, you could draw a picture of a bird and a picture of a fish. Tweening between the two would produce a series of pictures, or objects, that slowly transform from one to the other. You can set the number of picture to be used, a larger number gives greater detail. What this function is intended for, is to speed up the process of creating animation objects. Normally you would have to draw each object manually, making it slightly different each time. This way is almost instant and a lot easier. There are many other powerful functions such as bending, rotating, mirroring etc. A maths processor is not needed but it would speed up the operations even more.

The animation program is considerably powerful as well. The drawings produced with the draw program consist of a number of objects. These objects can be selected as actors or backgrounds. The actors are the selected objects that move around the screen, and the backgrounds are usually long term pictures such as scenery.

The Animate program again has it's own help screen. It is not hard to get an actor bouncing around the screen. Basically each actor has a track which it follows. You can plot the points on the screen and the actor will follow these. The closer the points are together, the slower the actor will move, the further away they are, the faster. The track can be all around the screen. A simple animation to try out is a bouncing ball. If you get the distance between the points correct you can make the ball look very realistic, slowing down as it reaches its highest point, speeding up as it reaches its lowest, and so on.

Options are available to edit the actors track, edit/show frame data and actor data, all of which is explained well in the manual. Help screens are again provided and give you a lot of useful information.

I used Cartoon Maker on a 80286 machine and it did run very well, smoothly and quickly. The drawing functions are almost instant, a lot faster than some professional packages I have seen, but CGA is a fast mode of operation. It would have been nicer if a VGA mode was available, but VGA does use a lot more memory. A graphics screen in CGA only takes up 16,000 bytes, where as a VGA screen takes up 64,000 bytes. Using the block-move machine-code instruction, a CGA screen can be written from memory is less than a twentieth of a second, fast enough for realistic animation. The program uses a clever compacting routine when storing the files on disk, so you don't use as much space as you think you will. Large files stored on hard disk can also be transferred onto several floppies, for viewing on another machines with the freely distributed Play program routine.

The only problem is, is that CGA graphics are a little blocky, but for home use, or a showroom display, this package is very good value. At a retail price of **£29.50** and with a telephone support line available, you can't really go wrong.

More information can be obtained by writing to Cartoon Maker, c/o John Brown, 85 Back Lane, Clayton Heights, Queensbury, Bradford, BD13 1HB. Tel: 0274-883571 or daytime 0274-733466 ext 8401.

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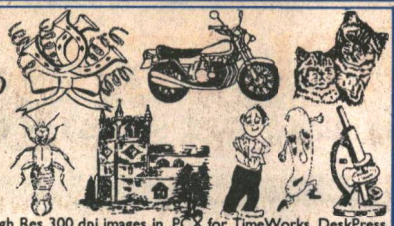

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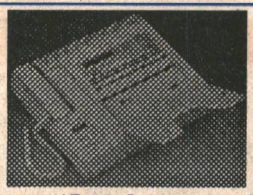

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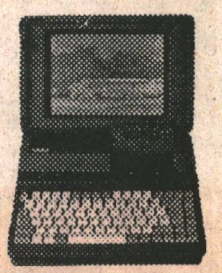

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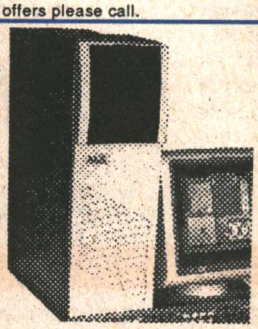

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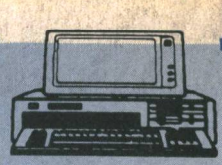

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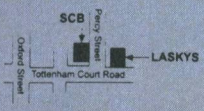

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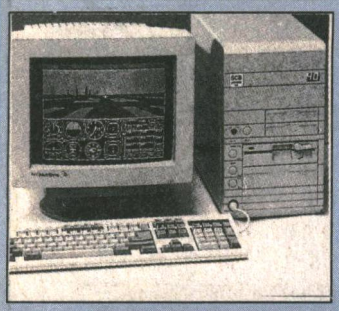

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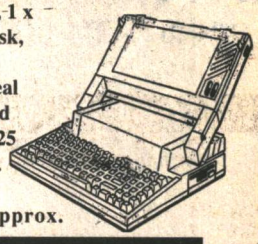

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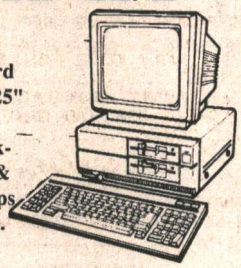

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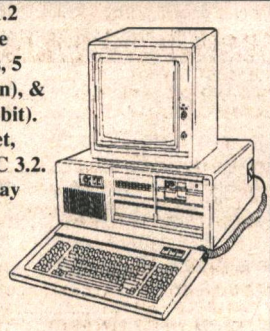

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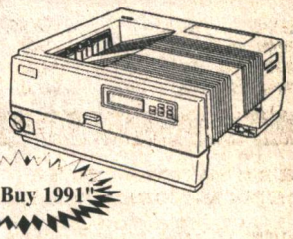

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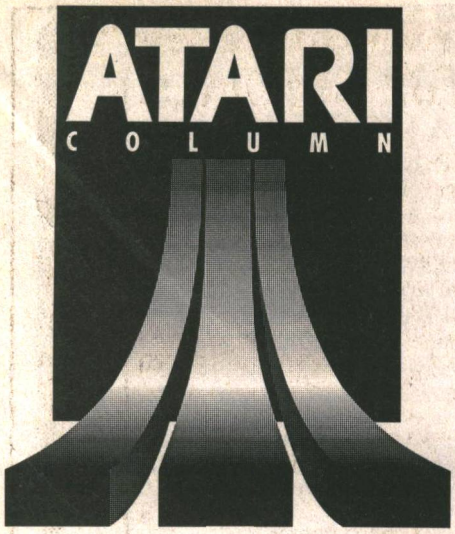

With summer just around the corner, it seems that, for many the appeal of computing fades. Fewer new titles are launched by the software houses, whilst the hardware manufacturers dream up ever more exciting offers. Bargains for buyers of hardware are more than possible in summer months-they are a necessity.

The same applies whether you are buying an Atari or an upmarket 486 system. This is reflected by the higher rates of company failure in summer months. Already this year, several once popular dealers of Atari equipment *(and other types)* have ceased trading. Only this month, **Software Express** of Birmingham threw in the towel - they were one of the oldest established Atari stockists.

Why do once successful companies end in this way? No doubt there are many reasons, but through time increased competition is a common cause. If the dealer doesn't move with the times and diversity, perhaps even into offering a mail order service for example, then it may be 'overtaken by events'. Stock holdings may rise and sales may fall; this , together with increasingly less competitive pricing, fuels further decline. So what can be done to protect the customer in such circumstances? As a general rule, never part with the full purchase price until the product is in stock. It is better to offer a small deposit as a token of your good faith - 5% is a common level of deposit. Anyhow, on to brighter things!

RIP STFM

Atari have finally confirmed the end of the Atari STFM and Mega St models. You ought to be able to buy these models - new - at heavily discounted prices. The 520STFM Discovery Pack currently has a United Kingdom promotional price of £249 including VAT at 15% *(I'm not sure whether retailers will, or should, absorb the 2.5% increase in VAT).* The Mega 1 has an RRP of £549 (£589.99); the Mega 2 at £699 (£934.99) and the Mega 4 at £799 (£1279.99). The OLD prices are shown in brackets. These prices finally show for just how long Atari UK have lived in 'cloud cuckoo land'! The Mega ST's were always over priced and over rated. These promotional prices, devised by the UK's leading Atari distributor, suggest that somewhere down the distribution chain substantial profits margins have been eroded - and about time too. What ever happened to "Power Without The Price"?

So we are left with the wonderful Atari STE range and the 'soon to be here' Mega STEs. I guess we will see very few Mega STEs until the stock of discontinued Mega Sts are sold. At any rate, the prices are falling. There is currently an Atari STE promotion. The 520STE Turbo Pack at an RRP of £349 (£399.99); the stand alone 1040STE at £399 (£499.99); the 1040STE PRO24 Pack at £429 (£499.99); and the 1040STE Extra Pack(£499.99).

This and That

I accept no responsibility for this paragraph...I found it in a soiled piece of note paper floating along the Leeds & Liverpool Canal! Take the serial number of your machine, for example A109xxxxxxx. The A1 represents Atari's factory in Taiwan (only one at present). The third digit, in this example 0, represents the year of manufacture. 6 would be 1986; 7 would be 1987...9 would be 1989; O would be 1990; 1 is 1991. The fourth digit, in this example 9, represents the month of manufacture. 1 is January; 2 is February...9 is September; A is October...C is December. The remaining digits are as elusive as ever. My apologies if this seems to be old hat to you, but it was news for me!

John Rosenbrook writes from Hamburg inquiring about the 'Electronic World Atlas' mentioned recently in this column. I do not know the details of the German distributor but here in the United Kingdom it is handled by Gralin International, 11 Shillito Road, Parkstone, Poole, Dorset, BH12 2BN. I am sure they will be able to send one mail order to Hamburg. *(Letter on the way to you John.)*

If you wish to write to me about Atari 'matters', or this column, please do remember to enclose a stamped addressed envelope if you expect a reply. I always will endeavour to supply an answer but this a can take a week or so. Writing is simply a hobby, I also have two full time jobs: Working as a Marketing Manager and the other as a husband/father. I am looking forward to hearing from more of you!

I recently heard from the **Atari ST Users Association**. Based in Bedfordshire, this group was established in 1990 to cater for the needs of all Atari ST users. The fee is £15 a year (£18 if you are a single sided drive user) and for this you receive a bimonthly magazine "STupendous" together with an accompanying club disk. If you should require it, a sample copy STupendous, together with contacts and a club disk, is available for £4. *(Is this a bit steep?)* Anyhow, they seem keen enough so why not contact them? The Atari ST Users Association, 18 Poplar Close, Biggleswade, Bedfordshire, SG18 0EW

Mug Shot

I recently obtained MugShot, an entertaining 'package' distributed here in the United Kingdom by Gralin International. It is well documented and, to the best of my knowledge, currently available from stock. I am indebted to Michael McGowan for his co-operation MugShot.

There is either a serious bug with MugShot, or it may be that it needs ALL the available RAM on a .5 Mb ST to start up. And what a long time it takes to start up - at first, MugShot seems to be loading the entire (200k) file containing all the MugShot data, but it soon becomes clear that MugShot constantly refers to its data file during operation. For owners with a single floppy drive and insufficient RAM to operate from a RAM disk, the method MugShot uses for loading parts of this data file is rather slow. Once MugShot is loaded the first thing of note is the iconised menu as opposed to a drop down menu. This makes a pleasant change.

The data file contains the facial features allows just about any variety of faces to be created, which perhaps compensates for the delays during access to the data. Moving through this file automatically draws the facial feature in a large window which can then be edited using paint package type facilities. These are fair and are satisfactory for small details, but most users are likely to prefer to save the face in either **Degas** or **Image** format for editing in specific packages. In summary, because the package is meant more for fun than serious use. It's not too bad. However, the limited paint facilities and the lack of efficiency in the 'speed' department possibly suggest infrequent use after purchase.

Finally...

Apple have recently launched an excellent ink jet printer for less than £300 retail (excluding VAT). It seems to me to offer much better quality than a 24 pin dot-matrix machine.

This Apple product is intended for the rapidly growing numbers of Mac users - thanks to the low cost Mac Classics and LCs. It is of interest to Atari users because it features a non-proprietary 'engine'. If Apple can do it at this price then so too can third party manufacturers. Perhaps we will soon see a model suitable for Atari STs?

This issue of Micro Computer Mart sees the launch of two brand new columns devoted to the extensive Commodore range of machines and to the subject of Computer Communications

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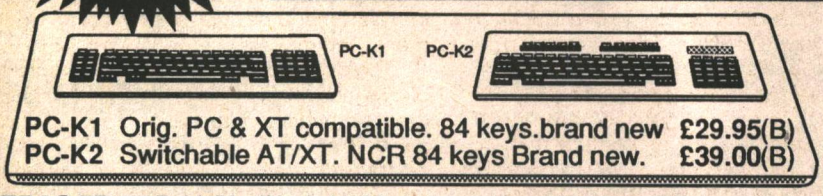

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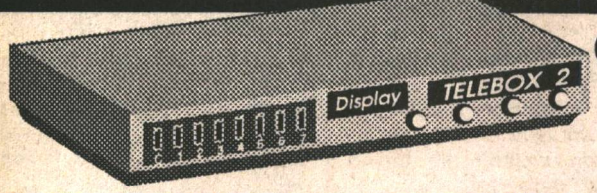

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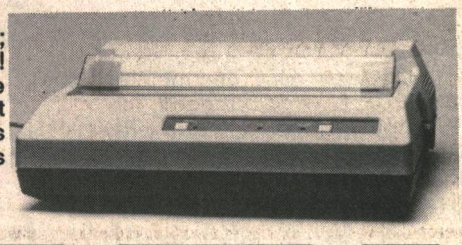

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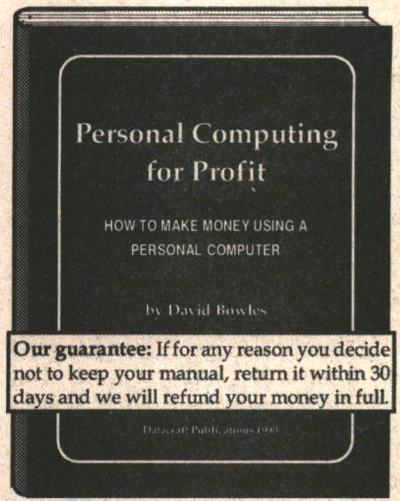
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DC Utilities V2.0

Evelyn Mills takes a look at the DC Utilities package for the Atari ST...

There is a wide selection of utility packages available both via Shareware or PD and commercially, for the ST. In this issue of Micro Computer Mart, Evelyn takes a look at a particularly useful package...

Basically this is a collection of utilities produced by the **Double Click** software programmers; no doubt many of you are already familiar with version 1 *(via Squish I am sure)*. Version 2 contains both new and updated programs which should certainly prove their worth as a purchase and the programs may be run directly or installed as accessories. The manual will explain all - indeed it is written with too much explanation which can be muddling in terms of plain instructions; just FIND and mark the requisite information which is, in general, supplemented by good screen instructions.

DC XTRACT PLUS is the first utility to consider and is concerned with the manipulation of archived files. Well, there are 14 pages of explanation here which could daunt the beginner. Fundamentally however the program is simple enough.

On running same, the main screen shows an array of options down the right hand side of the screen, namely - CONFIGURE, SEARCH, ADD, EXTRACT, PRINT, TEST, VIEW, OK AND EXIT. The configuration Menu allows for archiving, subject to the extensions. ARC, LZH, ZIP and ZOO.

The extra facilities offered here are the overwriting of existing files, the creation of folders, directory display, date/time manipulation and aborting on a bad header.

The view option is quite interesting in the sense that a whole host of information is supplied about archived files - as a point of interest I looked at the animals 1 of the Stos archived files and obtained the following. Animals 1 MBK 26700 Crunch 49% 13806 11/28/85 03.34a

Referring to these as a,b,c....h, the information is as follows:

a - filename stored in the archive.
b - original file size before compression.
c - compression method.
d - compression ratio%.
e - compressed file size.
f - the date when the file was archived (note American method of month first, followed by date).
g - the time of archiving.
h - the checksum (CRC).

Searching may be done through all the contents of a file and the Menu screen here has 20 file extenders available (PRG, *TOS, *DOC, *BAS, *GFA, *NEO, *PI1,2,3 AND *IMG being representative samples). There are also two extension facilities (for your own file choices), plus extension masks. Once your selections have been made and the extraction procedure of a file or matched files is complete, a tick will appear against the name. There is a great deal within DC Xtract Plus in the way of checking, overwriting files, and archiving files that is explicable on screen. Any errors in handling will be declared - no crashing here. This system is worth full exploration.

Squish?

Now we come to the updated SQUISH program for packing files. Executable files are required here including TOS and GEM programs. Alerts are given for programs that are too small to compress and the FAST BIT will only work on Tos 1.4 or greater. Files may be 'squished' individually or as a batch. All compressed files will be shown in total bytes and the percentage compression given; once compressed they are directly Executable. Full details are given in the Manual concerning some problems which might arise with some programs which write information back to the original program; as the author points out in this respect, errors may occur here when the program attempts to save such information.

Being curious, I tried this out with **Talespin TOS** and, while the development program was compressed around 46% errors did arise when running the development system - well, I was warned. Squished files are readily unsquished if required; this is a good 'packing program', with excellent on screen selections for batch compressing and decompressing; the program clears both Block Storage Memory and all free memory. The author has provided a good, fast update from the original Squish program with well designed on screen instructions clearly explained in the manual. There is a lot more to compressing than you think !

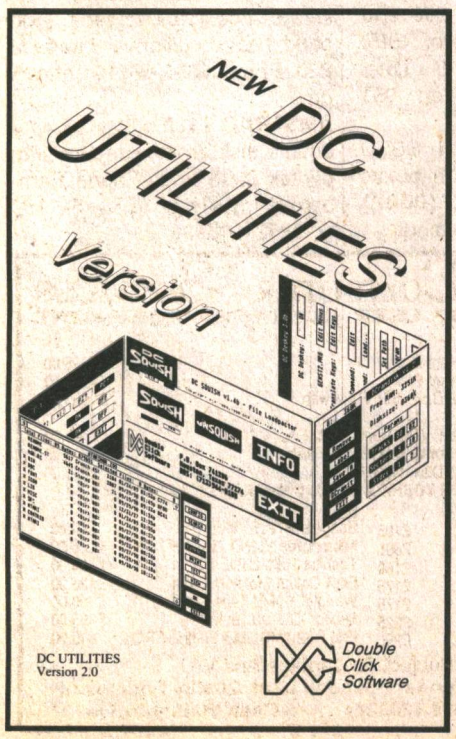
Next we come to **DC DESKEY 3.0** which is another collection of useful tools. Firstly a single key-stroke may be assigned to a drop-down menu entry, while key combinations may be re-translated - eg. *(Control) + (F10)* could be changed to *(Alternate) + (G)* if you so wish for one reason or another.

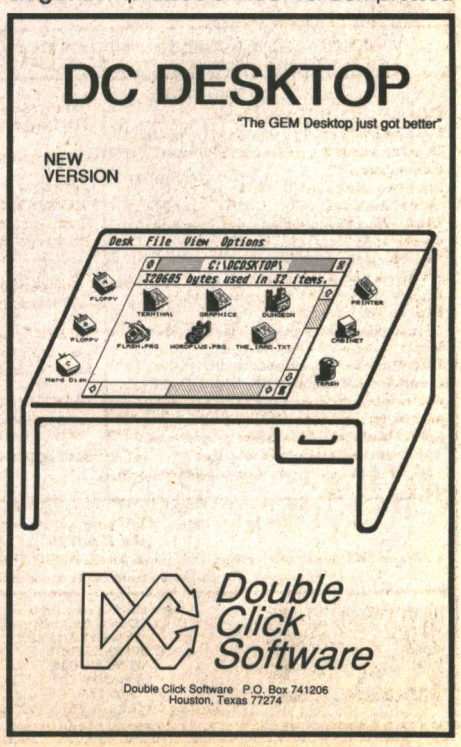
A more useful contribution is to assign a time/key control; this serves the purpose of saving to disk as you program. When the option is called up a dialogue box will ask for the number of keystrokes required or, alternatively, the time interval in minutes for each save to be made; as well as entering the keys or time commands, associated key commands may be entered to produce an audible sound warning when the menu chosen is about to be performed.

No Restrictions?

DC SEA 2.0 is another self-extracting arc which again will create Executable programs from those with the file extenders already described. The Executable program may, of course, be restored to the normal file. Why have two such programs on the one disk you ask? The idea here is that no restrictions are placed on the distribution of programs created by DC SEA. It should be noted that DC SEA programs are created from files archived previously by other archive programs in other words there is a CONVERSION of previously arced files to SEA....! *The extender here is APP.*

The collection of utilities also contains a **DC FREEZE FRAME 2.0.** I am sure readers are conversant with the PD **Snapshot** and **Pic converter** utilities for taking a snapshot and converting to Degas or Neo pics. Freeze Frame does exactly the same BUT the intermediate conversion step is eliminated and the pic. saved automatically to Degas, Degas compressed or Neo - for compressed





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DC UTILITIES

See the review elsewhere in THIS magazine..!!

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DC Utilities V2.0

pics. a buffer may be allocated. Another duo of programs is concerned with RAM disk creation and handling. Here we have two titles - they are **DC RAMit** and a **DC RAMdisk** program. The former may be installed as an accessory or run as a program. Most readers will know that the installation of a RAM disk allows a much faster execution of file copying and this particular one is considered to be 'lightning fast'. Full operational instructions are provided, the installation is controlled by screen dialogue boxes and the RAM disk created may be configured by sectors, tracks and sides *(80/82, 9/10 or 1/2 respectively)*. Should you wish to save the disk created the option is there and the configuration, when correctly installed, will load the RAM disk contents automatically - the disk in question may also be labelled. An interesting image file can be created which is an exact replica of the RAM disk as it appears in memory, with all the contents collected in one file - this may also be loaded on bootup, giving fast access to all programs and files therein.

The companion to this RAMit program/accessory is a DC RAMdisk program which should be installed in an auto folder; this particular partner installs a reset proof RAM disk - turn the computer off however and the contents are lost which is a rather standard feature of many such programs.

Coming to the penultimate program we find yet another extractor **DD Xtract 1.0** which will function only on .ACC files - that's it. The last program in this collection is a **DESK ORGANISER** controlling icons, windows, colour, baud rates and printer output; once the program is executed as described (follow screen instruction) a new desktop will appear. Naturally you may wish to create several desktops - a feature which is simply done via alert boxes.

Now, I am sure it must be apparent that there is some overlap amongst a few programs; the reason for this is that there are three authors concerned with the creation of the collection. The fundamentals are all there, the programs work well, and the overall collection is excellent.

You may expect to encounter a bit of renaming of extensions which might be awkward for beginners. Although the Manual lack clarity in parts, the material is good none the less and, should you so wish, you may MAKE an excellent accessory disk out of the contents - alternatively run them as individual programs.

Owners of version 1 of the DC utilities should consult Double click software for possible updating. This American product is available from **Softville Computer Supplies, Unit 5, Stratfield Park, Waterlooville, Hampshire, PO7 7XN. Tel: 0705-266509.** Softville also market the innovative DC Desktop.

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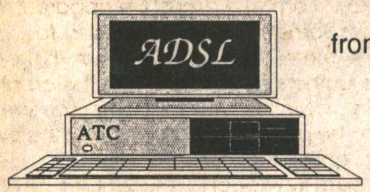

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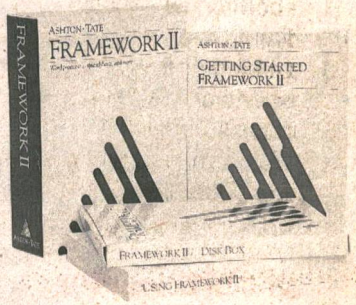

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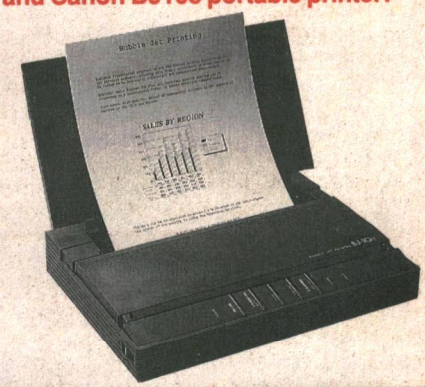

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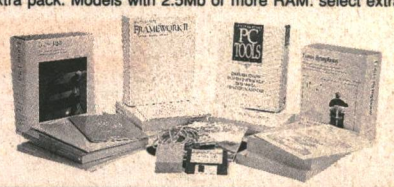

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3386 ST

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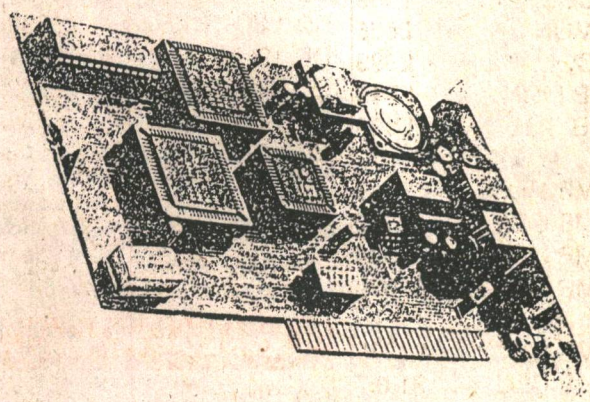

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modem matters

In this issue of Micro Computer Mart we begin a new column devoted to Computer Communications. We intend to cover all aspects of the 'Comms' scene. Future articles will cover online services, privately run bulletin board systems at home and abroad, remote and local inter-computer communication and there will be a helpful tutorial feature to ease the way for all you budding Comms enthusiasts.

The topic of communications is one that will inevitably crop up among the majority of computer users. At the simplest level, communications can be nothing more than transferring information from one computer to another - locally and in the same room via appropriate connection cables. At the more complex levels, high speed data transfer over satellite transmission lines may be the order of the day. As a subject or interest, this field can be as simple or as complex as you the computer user requires.

Communication between computers is generally accomplished via serial to serial or parallel to parallel port data transfer. Some of the earlier machines on the market were not equipped for such tasks - they were not *future compatible*. They lacked the necessary serial or parallel ports to facilitate any form of communication. If you are not too sure what serial and parallel ports are at this stage, don't worry - Micro Computer Mart will be publishing a step by step communications tutorial over forthcoming issues.

Nowadays virtually any computer with some sort of input and output port, can be used as a 'terminal' for a wide number of applications. The use of a modem plus appropriate communications software, will enable many of us to put our machines 'online' for the first time. Why should we even bother going online - are there any benefits?

The benefits to you, lie in the liberation of your machine - it is no longer an 'island' it is capable of receiving and sending messages and files locally in the UK or just about anywhere in the world, where there is a 'host' computer available to connect with.

Modems allow your machine to utilise 'cheap-rate' telephone lines to establish contact with a wide variety of privately run, public and subscription systems. Whether your interests lie in playing 'solo' games, pitting your wits in real time, against others, making new friends, sending messages back and forth between systems or simply building up a library of useful 'downloaded' shareware games - communicative computing should really be considered as a worthwhile extension to your existing system.

Getting started

Modems and software are available to fit a wide number of machines - their prices vary from just a few pounds up to many hundreds. If you are a PC, Atari, or Commodore user, there is a likelihood that communication's sofware can be obtained cheaply from Public Domain and Shareware sources. Regarding modems, it's wise to go for a cheap basic device to begin with - the classified pages of Micro Computer Mart are very good in this respect, sometimes you will see simple yet usable modems and software on sale for as little as £10-20.

When you make you your first modem purchase, don't be afraid to ask the vendor for a little help in setting up, and what to expect. After all, he/she had to start somewhere and for the most part, communications users tend to be 'friendly' crowd, keen to offer help and advice to others.

Setting a system up correctly, can be a time consuming business if the subject is new to you, but the motto is to 'persevere' - the thrill of making that first remote connection, will more than make up for the effort expended. Initially you will probably establish a connection with a local Bulletin Board System (BBS). These are databases run for the most part by individual enthusiasts around the country. Many are interconnected by electronic mailing systems, so communication with a wide variety of bulletin boards may be achieved by only 'logging on' to one local BBS. I stress local, because it is very easy to build up an enormous and unnecessary telephone phone bill by calling *long distance* BBS's. There should be plenty of BBS's available for the cost of a local call. Micro Computer Mart's Communications Expert - Mark Caro, will be publishing a regional round-up of UK Bulletin Boards. There will also be features on boards of particular merit or use to certain computer user groups.

Special Interest Groups

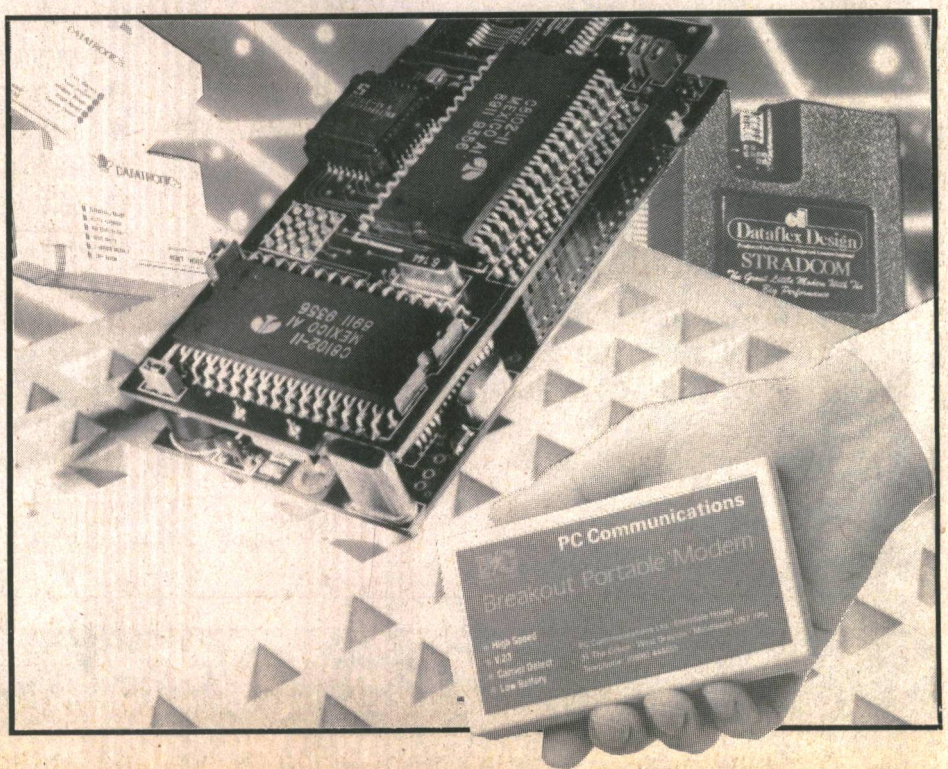
If your interests lie in 'C' programming, we may well be able to put you in touch with online systems devoted to this subject. While the inveterate gamesters amongst us, will benefit from our reports on the latest Public Domain and Shareware game releases - these programs are nearly always available from 'good' bulletin boards.

Mark Caro will also be looking at the differences between subscription and completely open BBS systems. There will be coverage of systems available by modem from the United States and Europe, we shall also be keeping our eye on British Telecom's **Prestel** service. Look out for a feature on this network soon. Business users may benefit from our coverage of some online information retrieval systems and commercial products such as British Telecom's Telecom Gold. Not forgetting educational matters, Micro Computer mart will be looking into **Campus 2000** - a service used in a wide variety of schools and Information technology systems throughout Britain and Ireland.

On the hardware and software front, we shall be bringing you reviews of the latest modems and most innovative software, as and when they are released. Naturally a new column such a this will benefit from reader input. Why not get in touch with Micro Computer Mart, and tell us what you would like to see. Please address all enquiries to:

Mark Caro
Communications Editor
Micro Computer Mart
24 Richmond Road,
Solihull, Olton. B92 7RP

We shall be holding a prize draw amongst our readers letters on an occasional basis - the lucky winners will receive useful communications oriented tools and packages.



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Fine Tuning for Performance

Dr John G. Wright shows us how to optimise our computer systems

Eventually we all wish we had a better computer. But have you thought of fine tuning your system and the use of software to improve it's performance and your productivity? Usually a hardcard is the first add-on bought for a floppy based system. Of course there are quite a few things you can do to extract even more performance from it.

If you've just acquired a hardcard, sit down and plan the directory structure in detail. Avoid multiple sub levels such as C:\JOHN\WP\WORK\ARTICLES\MICROMART\ filename and C:\John\PERSONAL\GAMES\ADVENTUR\NAME\ filename. This is the best way to lose files! Keep the structure shallow and wide. A structure such as C:\WP; C:\ARTICLES; C:\LETTERS; C:\MICROMART; C:\GAMES\NAME\ is deep enough. It vastly reduces the amount of typing you'll need when copying and deleting files for a start.

Next create everyone of these directories, and one for DOS, without installing any of the programs. *(Include a few called \OLD, \SPARE, \TEST, as its always handy to have these ready made when experimenting with software).* This puts all the directory lists in the first one or two cylinders of the disk. Then, after booting, the disk head will be next to the directory table and won't need to search back and forward looking for them. Now install the software you expect to use most of all first. This means the disk head will only have to move to the next cylinder to start loading your favourite program, thus speeding up access time. The DOS PATH command gives access to programs in directories other than one currently being used. But long PATH lists mean the computer will search all these paths before reporting File Not Found if you mistype a name. So restrict it to only the essentials like \DOS, \UTILS, and \BATCHES. Do consider using batch files to change directory, run your program, and return you to the root directory. The time saved in typing *(and retyping)* isn't much, but the frustration it avoids will increase your general productivity.

Fragmentation

If you have been using a hard disk for some time it's highly likely that many of your files are fragmented - stored in non contiguous sectors. When you delete files you no longer need, or when a word processor automatically deletes an older .BAK file, gaps are left on the disk in the form of empty sectors. The next file saved will be spread across these empty sectors, splitting it up. Many programs create temporary files while being used, save files after this as .TMP files then delete the .TMP files when you quit, unfortunately this leaves even more gaps and empty sectors.

Over a period of time files become spread all over the disk in sectors nowhere near each other. You can hear the disk head dementedly zapping back and forth loading the data for only one file from a large number of locations! Think of the wear and tear on the actuator, the increase in access time, and the noise.

Disk defragmentors search out these fragmented files, rewrite them contiguously after the last used sector on the disk and then delete the original fragments. After moving the first few files, they can then rewrite small fragmented files contiguously in the larger gaps which have been created. Some have a Fill or Pack option which effectively shuffles files around until there are no longer any gaps left at all.

Norton, Mace, and **PC Tools** all include such utilities, though a shareware program with all the same options at a much more acceptable price is Disk OrGaniser *(DOG 2.06 for short)*. After using **DOG**, you should notice the hard disk seems a bit quieter and a bit faster, with the head jumping around a lot less. Home users will only need to use it every 4-6 months after the first organisation of the disk, but business users might find that once a month is preferable. still on the shareware theme, look out for PACKDISK - another useful defragmenting tool.

Concerning hard disks, the interleave factor used when formatting the disk can be optimised by some programs. Consecutively numbered sectors are not actually next to each other on most disks, but separated by 2, 4, or more sectors. This is to allow the disk controller time to transfer the data it's read into the computer. If the sectors are too close together, the head passes over the next sector while the controllers still transferring data and then has to wait for a complete revolution to bring the sector around. Unfortunatly this means that there are too many sectors in between and the computer sits doing nothing while the disk rotates.

Accelerate

Programs like **OPTune** can test and reset the interleave to the optimum for your system. *(OPTune can also defragment files).* Again shareware equivalents exist. **IAU** is a program which can adjust the interleave without reformatting the disk. It apparently doesn't work on **RLL** drives though, and is more successful on AT's than PC/XT's. **OPTIM** and **ILEAVE** do much the same job. **INTERLEAVE** is another shareware product which includes lots of data and advice on interleave. However these programs are for the more adventurous users. Its best to use them after a complete back-up of your data files.

There are two ways to really speed up a computer - RAM drives and disk caches. A RAM drive creates a "disk" out of memory and has an access time orders of magnitude faster than a floppy or hard drive. Thus enabling almost instantaneous access to files *(usually utilities)* stored there. But if you save a data file you are editing on a RAM drive and lose power, or quit and switch off, you have lost all the data - Word-processors warn against temporarily saving files on such drives, but often suggest placing spell checkers there for further increases in performance. **RAMDRIVE** comes with DOS, while **MEMBRAIN** was one of the very first versions available , and some of its newer rivals even use **LIMS/EMS** for the RAM disk.

Moving onto the benefits of caching, a disk cache stores the most recently read disk sectors in buffers and instead of having to re-access the disk when a program requires this data again, the buffer supplies it instantly. Most caches are read only, data being written to disk as usual. Some caches read ahead the next sector just in case it's needed. While others watch to see which sectors in memory are used most often and replace rarely used ones with new reads. Disk intensive programs like databases become faster, but word-processors only speed up slightly. On the shareware front **KWIKCACHE** and **CACHE** are a couple of caches you could try.

The slowest part of a PC is the user-keyboard interface - your typing ability. Apart from learning to type properly with products like **PC FASTYPE** or **PC TOUCH**, there are many ways to increase your productivity. You could also redefine some of the keys, usually the Function keys *(F-keys)*, including Ctrl - and Alt combinations, to carry out some common commands, like DIR A:\W. You can do this easily from the AUTOEXEC.BAT by including DEFKEY or SETKEY, with the previously *(and conveniently)* created alternative key definitions. NEWKEY is capable of even more complicated redefinitions, enabling, say, your entire address to be entered in a word-processor in a couple of keystrokes. For your own sake don't redefine a key to erase files or format disks!

DOSEDIT is one of the most useful little utilities ever written. It's a keyboard buffer which makes DOS's F3 seem positively primitive. It stores a list of the commands you have entered in a buffer. If you have to repeat a set of commands on a group of files or disks, but not necessarily in the same order thus ruling out a batch file, then using the cursor keys you can recall any of the command lines you've already issued.

The cursor keys also let you edit the command, changing say the drive or file extension, without deleting the letters you pass over. This is the way DOS should have been written. DOSEDIT also allows aliases, shortening commands to fewer keystrokes, like **fmt** for FORMAT, **tp** for TYPE, and so on. Once you've used DOSEDIT, it will become a permanent feature in your AUTOEXEC.BAT.

Finally...

Checking the contents of a directory is much easier if the files are listed alphabetically. Try using SDIR, which gives a sorted, two wide, display. We all misplace files at some time.

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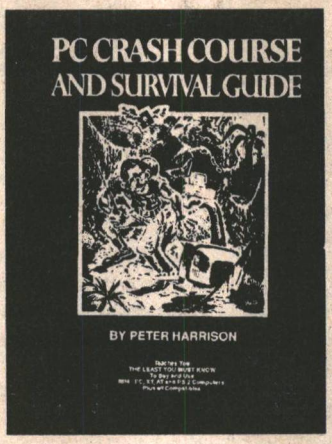

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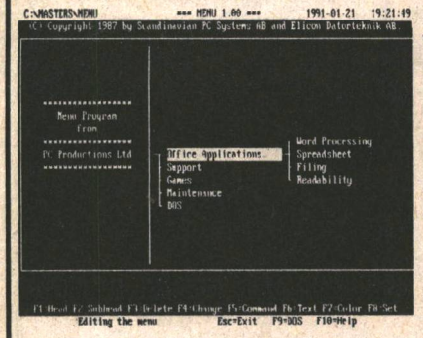

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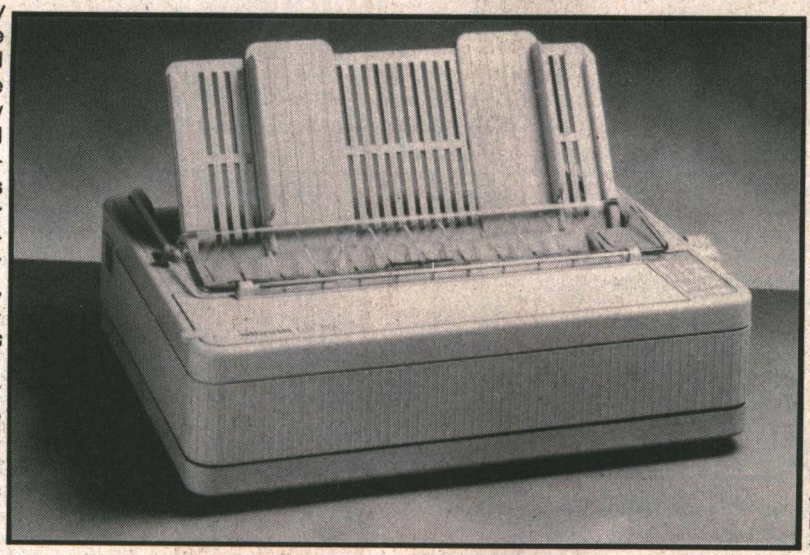
Micro Computer Mart recently had the opportunity to examine Olivetti's DM 124.

For a number of years the name Olivetti has become synonymous with office applications. Now it seems as if their marketing strategy has shifted emphasis - the launch of economical multi-purpose dot matrix printers such as the DM 124 must surely be good news for home users.

Olivetti's DM 124 is available in two printing configurations, monochrome or colour. It is important to determine your printing needs before you make your choice from these two as the standard monochrome printer cannot be upgraded to colour - as with some models from Star for example. Although both the DM 124 and the DM 124 C *(colour)* are similar in appearance, the major differences lie in the depth of the ribbon cartridges, the shaping on the transparent cover and the labelling on the operator console. The illustration in this article is the monochrome only Olivetti DM 124.

Unpacking the DM 124 reveals a light grey printer unit complete with integral power cable, manual and ribbon cartridge. Physically the unit is midway between standard and compact printers with dimensions corresponding to a height of 99mm, a width of 384mm, a width of 299mm and a weight of only 5.5kg. The absence of a collection of manuals, software disks and other paraphernalia is reassuring as it indicates this machine will function without having to endure a complicated set-up procedure.

Externally the DM 124 series appear to have had a touch of the 'Italian Designer Flair' applied to them. They are undoubtedly handsome units, smoothly contoured and attractive in both home and office settings. A side view shows a paper feed knob and parallel (Centronics) connector, whilst the top view displays the front cover, rear paper support with guides, paper selection lever, transparent cover *(over the paper roller)*, push tractor, and the operator console *(more on this later)*.



Opening this front cover reveals the ribbon cartridge carrier and the heart of the machine - a 24 needle printing head. The ribbon supplied is rather similar to the extremely efficient Epson FX series Moebius loop design - it just clips into place with part of the exposed ribbon threading between the printing head and a pressure plate assembly and anti-smudge guide. There is also a print head distance lever which must be adjusted to suit the weight, quality or paper thickness in use for printing.

After attaching a suitable printer cable, loading up the ink ribbon, selecting paper type (either fanfold or single sheet) and switching on, you should, in theory, be ready to print. There is a 'test print facility but in order to run this, you have to activate the printer from an OFF condition, so once you have loaded a sheet of paper you have to switch the machine off. Then holding down the **line feed** key on the operator console, you must switch the printer on again. This key must be depressed until a mechanical reset of the machine has taken place, after which time test printing will start.

The resultant sheet carries a great deal of information about set up. The first part of this printout will contain information on the printer's current status whilst the second part will show the current parameter settings (for the emulation selected) and the currently selected character set.

Operator Console

This allows the user to control the basic printer functions and also execute certain 'special' operations. The console is divided into three LED's to indicate the printer's status and four keys for selection and adjustment. If the printer has been switched on without loading paper, the **LOCAL** LED will blink slowly to indicate that paper is required to proceed with printing. *(This signal is not activated when the optional ASF 124 automatic sheet feeder has been fitted).*

The LOCAL key controls the functions of all the other keys, if it's LED is NOT lit, the printer is ready and online. When this LED is lit and the printer is offline - in this state, a paper feed function can then be selected. There is also a **SET-UP** feature triggered from the LOCAL key - activated by holding this key down for at least two seconds (you can cancel this feature at any time by tapping the LOCAL key twice.

This can be used to adjust pitch parameters, select emulations such as Epson LQ or IBM Proprinter. Draft, high speed draft, letter quality mode and the paper handling device can also be selected from here. The pitch control allows for a selection 10 characters per inch (cpi), 12 cpi, condensed or proportional print. Once the machine is set up for your particular requirements the settings will remain valid throughout a printing session until the machine is switched off from the mains. In order to record such settings permanently, there is also a **SAVE MENU** available - all this is much more convenient than other brands of printer which utilise 'fiddly' dip switches for setting and changing printer emulations and other print related parameters.

Summary

A test print made with the high speed draft printing option indicated a speed approaching 180 characters per second (cps) at 10 cpi, whereas the manual supplied quotes a top speed of 200 cps. At this setting, type was not as legible as one would have expected from a 24-pin dot matrix printer. Switching to normal draft mode improved matters considerably - here the test document printed at around 130 cps. At these settings the machine was remarkably quiet - probably due to it's thick plastic casing and sponge padded underside.

Switching to the LQ mode of operation produced very high quality output, but the premium was paid for in terms of speed. In LQ mode this printer slowed down to around 40 cps. These figures are all quite satisfactory though. In this market there are some machines which cost a little less and print a little faster - there are others that cost much more and print slower. Considering the features offered by this printer and it's price of £299 for the standard model and £339 for colour, coupled with the quality of construction and Olivetti's reputation for reliability - the DMP 124 series have to be considered seriously when making any choice from the mid-range of printers currently available.

Where this printer undoubtedly scores over models from other manufacturers at similar pricing levels, must be the provision of a very generous 40K printer buffer. This means in practice, your computer is free to continue working unhindered, whilst this Olivetti printer receives a document for printing in one large chunk. As opposed to several time consuming *(processor-wise)* bursts of input from the computer to printers with much smaller data buffers *(typically 3-8K in size)*.

The option of a single bin automatic sheet feeder available for only £69 is extremely useful. After all many small business's could find a use for this 'baby' Olivetti. More information on the DMP 124 series and the full range of Olivetti printers, can be obtained from:

Olivetti Office Ltd. Olivetti House, 1 Deltic Avenue, Rooksley, Milton Keynes MK13 8LD. Tel: 0908-690790 or Fax: 0908-603200.

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Roger Swindell U.S.GOLD

Henriques interviews Roger Swindell, the European Marketing Manager for US Gold.

Was 1990 A Successful Year For Us Gold And How Do You View The 8 And 16 Bit Market?
Yes, a very good year. Firstly, let me point out that I am speaking specifically about US GOLD but in general the situation may probably be different for other software houses. The 8 bit market is still very important to us. If anything 1991 could be more important to us because we have plenty of games in the pipeline, Capcom conversions, with up to 8 titles and they write very good coin-ops. Plus we have a Sega deal which recently saw Line Of Fire and lined up for Easter Super Monaco Grand Prix, Shadow Dancer. Apart from that there will be about 15 or so other 8 bit conversions.

How Involved Are You With Sega Direct In Japan And Do They Have The Final Say In Any Games You Are Converting?
We work together because there are machine and time limitations. We have excellent relations with Sega. Up until recently it appeared US Gold had the monopoly on SEGA conversions but a few other companies are now doing conversions from Sega. You might be confused. There are two different Segas. There are two areas of opportunity with Sega, one is Sega coin-op conversions and the other is for games actually being put on to the Sega itself! Strider 2 from Capcom was a prime instance of a game appearing on computer format and then going onto console!

What Of People Like Elite That Have Recently Released Two Sega Conversions?
Oh yes, the contracts for the two games this company acquired was over 18 months ago and there was also Golden Axe from Virgin and yet again the contract for this was a while ago. We made our options with Sega from early this year, from then onwards everything comes from us. It is an exciting period with Sega, with 4 titles just released on the console.

Has US Gold Got Their Own In-house Programmers And How Much Control Do You Have Over All The Developers Working For You?
We have not got anyone on our premises and it was a deliberate decision. If you had programmers in our main offices where all the sales and marketing is done it would be a shambles and slow everything down. We would have people calling asking about certain facets of a programme and the programmers in turn would be asked the questions, which would stop them working. We feel programmers need their own environment, protection and front door! We work with quite a few development houses and they are spread liberally all over the UK from London to Manchester - Teitex, Codemonkeys, etc. Probe are at present writing two games for us and are one of the best developers around. They are quite rightly proud of the programmes they have written and are always willing to present their product. With any product they write for us they are not allowed to show anyone unless we are present! It is beneficial for them to just do the coding and leave all the promotion to us. We select the moment we release news on future products with great precision.

How Important Are Reviews To You?
Firstly, let me say, based on the information we receive back from customers we are a very different company. We set budgets, targets and we keep within those. We have a more disciplined structure. When you take US Gold and Centre Soft you are talking about a £50 million company! Now that brings us back to your question. We have a sequential order and the reviewers, magazines get their samples and we then contact the magazines to see what score we have achieved. Some people may construe this as pressurising, calling each time a game is sent but we use these marks in the press releases and inform the distributors how well the games have been received. They will, of course, order more if we have received rave reviews. Good reviews are important and where a product deserves a good write up I expect it to be done. If a product gets bad reviews, we will stand up and say that is fair. Editorially if they are completely impartial and place a bad review in and it warrants it, we cannot complain. We can always live with bad reviews, because it is a risk business, it is no different from the cinema or selling paperbacks or records. If you can tell me that every film which gets good reviews get big audiences or every bad review does not get audiences then fine, but that is not the way it works. We are very relaxed about it all. The only time we really get upset about reviews is when it is patently obvious that the reviewer is right up against a deadline and has not looked at the game in any depth. I can illustrate that but the magazine will be nameless. There was recently a review of Operation Stealth, the person reviewed the game the same day he got it. He did not review it at all, the person just rewrote the press release and referred to parts from the back of the box and we got just a very average review, when this happens we really blow our tops! Strangely there are differences in marks on certain games from different countries. The way the French perceive a game can be totally different to say a reviewer in Germany. Mean Street comes to mind. It obtained excellent marks in England, France but in Germany the game was marked down. When I visited Germany I went to ask them about this and the reason it was marked lower was because it was hard to categorise the programme. They viewed it as conventional adventure, which it was not meant to be and thus it was marked purely as an adventure game. The German and Scandinavian market is slightly different from the rest. They are more serious and technically minded. First they look at a game and say why would we want to play this? You or I would pick up a good blast-em-up and get on with it. The old action market has not disappeared in Germany it has just gone over to consoles and I guess this is a trend occurring on all the other countries. The action market is falling alarmingly fast on 8 and 16 bit computers. The games to take their place are programmes from Lucasfilm,

An oldie, from U.S.Gold

Roger Swindell U.S. GOLD

SSI, Delphine, etc. role playing games or really intricate adventures. We will never abandon either 16 or 8 bit machines and will principally write good conversions film licences or a really original idea.

Are You Targeting More Toward Any Particular Machine And What Trends Do You See For 1991?
CD TV is a definite no, we are not touching it. On the ST we are still very much committed and I know other people are saying they are not going to write for it. Most developers still develop on the ST so it will be a long time before you will see a marked decline in the releases. In America we have mainly people writing on Amiga and converting those titles to the ST is another matter as yet undecided. The schedule for Europe is already planned until September and every Amiga release will also be on ST and IBM. We hope some time this year to begin development on the Sega Mega system and on a hand held console but it is very early days. We have no plans to do anything for any other systems, Nintendo, etc. We do hope to do work on some cartridge games for the Commodore, its a bit early to be 100% definite on titles but Ghouls and Ghosts, Strider 1/2 and UN Squadron are in line. We are at present looking at the feasibility at putting these onto cartridge console. Similarly on the Amstrad console already a non US Gold Title has appeared on cartridge - World of Sport/ Epic. We will definitely be doing more in 1991 for this machine. The next titles on the Sega Master system will be - Heroes of the Lance, Kick Off and Outrun Europa. We also have the licence for the Godfather and the A Team so a cartridge game will appear from these Licenses. One of the pluses Amstrad cartridges have is that you can take advantage of smoother faster scrolling, high definition sprites and if you look at the games to date on the Amstrad they have not made use of these features because they have been ported over.

Are You Pleased With The Image Us Gold Conveys?
People that look upon us do not really know what we do. You cannot make a comparison with us to EA, Psygnosis, Microprose, Gremlin or Ocean because all of those people, everything they bring out is from Ocean, Gremlin, etc. it is branded. You can start to make comparisons against Mirrorsoft/Spectrum Holobytes/Cinemaware. They, Mirrorsoft, are an umbrella for a diverse range or products, like ourselves. The closest you might get also is EA and Bullfrog, Mindscape and Origin. US Gold apart from its own label, we will be representing, Atari, Sega, Capcom plus many more under its wings. We also do not release full blown Simulation programmes and probably never will. We leave that to people like Microprose. We have changed dramatically over the years. Games like Mean Street and now working with Delphine in promoting Operation Stealth shows how we have grown. We still have our roots in games like Zaxxon and Beach Head and the only areas we do not cover are simulation and education. We stick to what we know best. Epix brought out a package called Print Magic and we did not even attempt to touch it because nobody here has the marketing skills to present the product in its best light.

Releasing So Many Products Do Not A Few Get Lost Or The Weakest Looking Not Get The Push It May Deserve? Would It Not Be Better To Half The Releases And Give Them All More Attention And Coverage?
They may seem to get lost but they don't. Upstairs we have 5 product managers. There is a person for role playing SSI AD&D and New-World games another manager looks after American lines, Epix, Lucasfilms, Access and Sega, we have another one that looks after coin ops, principally Capcom, plus some originals, Delphine and two people on the budget labels, Kixx, etc. These people ensure that each product is presented on its own individual merit. We cannot cut our releases, what would we cut a Lucasfilm game, a new Capcom programme? You rightly may feel that there is not enough time between releases. The market in general over publishes. Christmas is a prime time for saturation and lots of programmes will fail but at the end of the day it is a commercial world, we will either make money or go out of business. At the moment, we are making money and I can see that continuing for a long time! I believe in 1991 there will be fewer releases in general.

Who Makes The Decisions On Us Gold Originals On The Quality, Ideas, Etc. And Do You Do Much Market Research Into The Titles That The Public Want?
It is a team - product manager, managing director, development manager, at least 4 people and I might look at a product. Plus there is also the game testers, all ensuring a quality release! We have lots of forums so we can get feedback from the public and of course there are the many shows where we glean information about our products. I must admit we do need to do more market research. I am, for instance, going to Germany shortly and the main reason I am attending a show is to find out what type of games they like to play and why certain games are hits in Germany. I meet not only distributors but the general public. The same will apply when I go to France, Italy or wherever. Development managers will be with me and will be taking note of what is said.

US GOLD - Its Origins?
There is a base in the States but we own it and everything is run from our office here in Birmingham. The company formed about 9 years ago, through Geoff Brown who started importing cartridges for the Atari or was it disks? It suddenly dawned on him that instead of importing them from America and at that time selling them for about £30/40 which was a hell of a lot of money, he could licence them much in the same way as the record business was licensing bands from America, manufacture them over here and then start to look to convert. 45 people now work at our base and indirectly another 50 are involved with US Gold.

Looking Into The Future, What Do You Perceive?
I can certainly say that within the next two years MS-Dos machines will become more widely used. We all know that in America it is the dominant machine, even in places like Australia it is 50% of the business/games. In America it is 75% only in the UK is it not gaining much momentum.

Most Or A Large Proportion Of Your Games Are Targeted At The Younger Section Of The Public Do You Not Feel That You Price Yourself Out Of The Market? Is There Any Way You Can Reduce The Costs?
I do not think there is. If you look at books the hardbacks are very expensive but eventually they come out in paper back and are much cheaper. I guess the best bet is to wait for the games to appear as budget titles or as part of compilations. I understand your point. We just cannot drop the price on most of our titles. Take Mean Streets, a lot of development went into this, its on three disks and has a comprehensive manual, there is not much left for us after it is sold to the trade. We make money, I understand that piracy has an effect on the eventual cost. Commercial piracy is terrible and I note your point that kids may pirate because of the cost but this is very small up against the professional pirates.

It Is Not A Pity That If Games Were Half The Price People Would Obviously Buy More But You Would Have More Impulse Buyers. To Spend £25 On One Game Needs A Lot Of Thought?
Development costs are very high. What you are asking us to do and we will not and other publishers would not ever envisage is to say drop the price to a quarter of the price and hope we would sell at least 6 times the amount. It is a risk we could not take! Do not forget people are buying games cartridges that are even more expensive. I do not know the answer.

What Was The Biggest Seller For 1990?
Italy 1990 - the biggest ever from us is probably either Outrun or Gauntlet. The biggest seller for 1990 on 16 alone was Champions of Krynn. 1989 Forgotten Worlds was a huge seller.

Do You Own A Computer?
I usually borrow one. I shall be getting one for my children and I shall be buying a Gameboy, very easy to take around with you and great fun, I like it a lot. I will almost certainly get a Sega Genesis next year.

That's it from US Gold and Henriques. More coverage of US Gold and their products will hopefully be appearing in future issues of the publication, US Gold are a large company.

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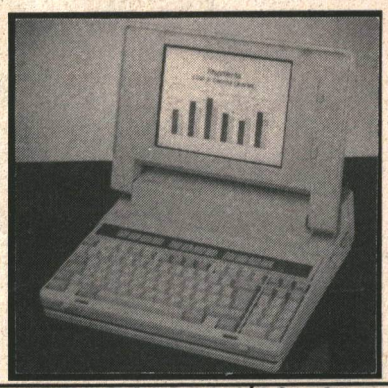

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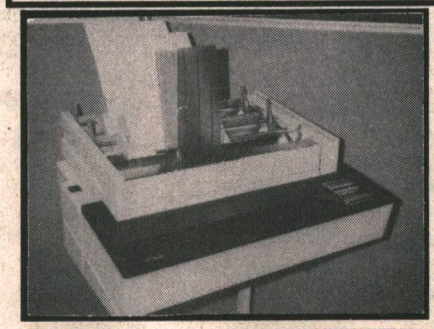

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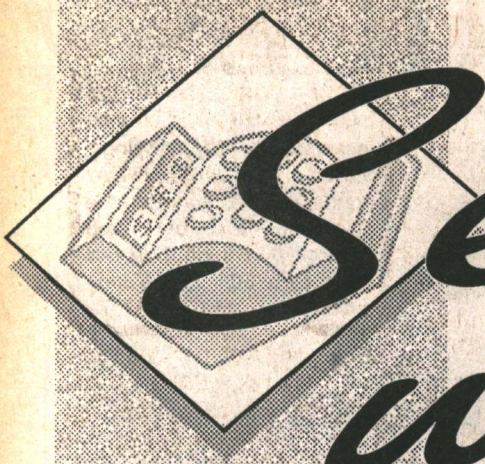

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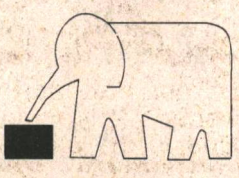

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Mac GOSSIP

Oh, oh, what a lovely show. Birmingham's NEC was the UK venue for this year's Macworld Expo circus, following its January spectacular in San Fransisco. And no sooner had the last performance ended that the Big Top was rolled up. Then the familiar caravan of painted wagons could be found snaking its way to a new town. A week later it was playing to the Paris crowds, then on to Amsterdam in May with a schedule for Berlin in June. You can't peg a good circus down.

Well, it's not quite that of course. Each country has its own circus, its own acts and side-shows all presented in the native tongue of the host country. Macworld magazine, from which the show takes its name, is published in a number of languages, including Japanese. If you couldn't get to Birmingham, and you can't catch it at one of the venues abroad, here are some of the thrills and colour spectacles you missed.

As with all good fairs and circuses, and as with the MacUser Show at the Olympia, there was a queue to gain entry. But there are queues and queues, and this one was among the most civilised I've stood in. It didn't rain. But even if it had there was cover and freedom from exposure to the seeping London drizzle and damp which fell upon weary travellers last November.

And since Birmingham is a more convenient geographical location for the rest of the country it might dawn on the less observant, some day, that there are advantages in decentralising the bureaucracy and literally centralising the show. Organisers at MacWorld know this well. The show comes back in 1992. Will other show organisers please bear note?

Regular show visitors would recognise the familiar stalls. MacUser was there and as supportive as ever. But there were some potential sideshows conspicuous by their absence, notably Apple Business and MacWarehouse. I expect they have good reasons. There's scope for a bigger turnout next year.

Once inside usherettes were everywhere thrusting programmes and carrier bags at their captive crowds. From the moment of entry there were stalls wrestling for a few moments of audience time to perform for them their well rehearsed acts. One stall, MBC Computer Centres, even offered a prize doll chance to win a Mac Classic. And the ringleader/promoter, MacWorld, held a subscription lottery for three laser printers.

Hype apart, there were some worthy spectacles. Apple UK brought all the family along - not chimpanzees - but an impressive range from the **IIfx** down to the humble **Classic**. True to form, in such events more recent additions to the act were ever ready to upstage the old hands and steal the show. The **Portable** and **LC** were getting most of the attention and their showmanship was almost an *affront* on public decency.

On from the menagerie to the dolphin pool. **MacAcademy** USA a Macintosh and Mac software training company, really entered into the spirit of the things. They win my rosette for their natty costumes of academic gowns and mortar boards.

As a service they offer a range of video tutorials, much used in schools, universities and businesses. These are already well established in the States. Seminars were given free at MacWorld. You can contact them on 0638-510309.

Off to a flying start the human cannon ball of the show turned out to be the launch by **Computers Unlimited** of their new mail order *(with support)* Software Club. quite upmarket it sells add-on hardware as well as software. If you haven't got a brochure phone 081-205-4548.

The high wire balancing act was the promotion, though not yet the release, of **UB2**. This, it is claimed, is the all powerful, humming, whistling, drums and cymbals, full orchestral band of a publishing tool. It's got everything, as long as the product lives up to the demonstration. But you'll have to cough up above £1000 if you want one of your own. It's got built-in graphics, a built-in word processor, and a form designer. I have to admit, what I saw was very pleasing to the eye.

Image Scanner

But, as the circus song goes, that didn't please me one quarter so much as the Ricoh RS322 Plus Image Scanner, tra la la. This attractive trapeze artist of a product performed so endearingly, I came away, not with a lovely bunch of coconuts, but with one of these robust little performers. Apart from one small reservation about the hardware getting intimate-with-you guide, first impressions are favourable. I hope to be reviewing this high flier in a future issue. But if you can't wait, get in touch with distributors, **Heyden & Son** on 081-203-5171.

God bless him, our Prime Minister knows better than most it wouldn't be show-business without the stars and mega stars. This observation had not gone unnoticed by one enterprising company whose slogan is: "Use us to realise your potential". If you're looking for work in the Macintosh State Circus a Birmingham-based recruitment agency, **Mediatec**, is on the lookout for you. It's all happening round here.

Candidates best-suited are those with good Macintosh, or IBM, skills preferably coupled with a professional trade. Sought after personnel range from word processing operators through to network managers. Traditional illustrators and studio staff are in demand, as are journalists and technical writers. If you want to earn your living in the circus and move with the Macworld show, registration forms can be obtained by phoning 021-622-7303

On to the jugglers. Circuses, like all businesses, need to be aware of public opinion and current trends. They also need to have a regulatory control over financial incomings and outgoings. Access Accounting was there with a variety of solutions, whether they were directed at family finances or the accountancy needs of larger concerns. If you've got one foot on the turnstile pedal the number to ring is: 0206- 322575

Back home there's time to reflect on the glamour and glitter of pre-packaged hype. And time for a good read. Encyclopedia Britannica were there but I had enough literature to carry back as it was. The biggest range of Macintosh books I've seen on one display was presented by mail-order dealers **Computer Manuals Ltd**. It's Computer Booklist catalogue can be obtained from 021-706-6000

It's not possible to give more than a taste for the thrills of Macworld Expo, and not possible to cover all the acts. Being there is the only way to see it all. When the show comes to an end images begin to fade...

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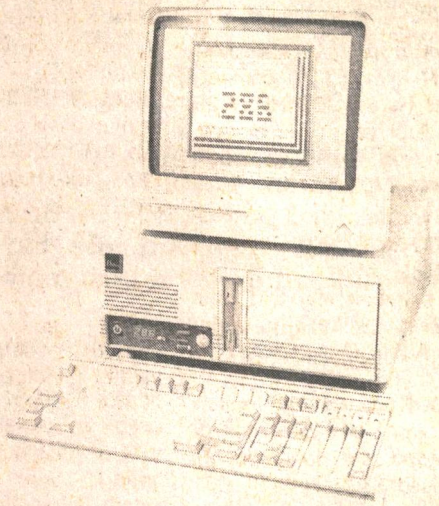

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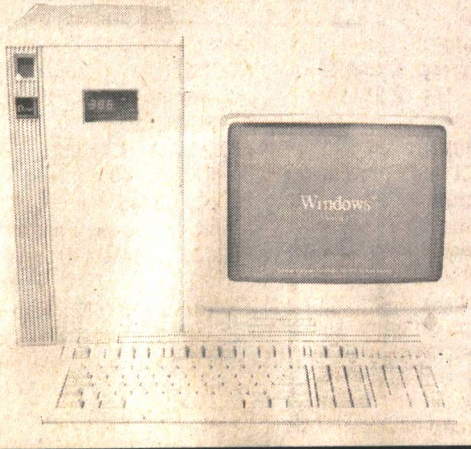

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4DOS

John Ambrose looks at 4DOS, the MS-DOS replacement?

4DOS is a product designed to enhance MS-DOS, as well as making the operating system easier to use. It is not a utility as such, but it actually replaces a part of MS-DOS, namely the command interpreter *(COMMAND.COM)*. John Ambrose looks into, and explains, it in greater detail. Read on to find out more.

COMMAND.COM handles all the input typed at the familiar 'A>' or 'C>' prompt. It is quite limited, with only a few commands, no help and very few editing functions. 4DOS does away with these limitations, and using it will benefit every computer, from a single drive PC to the latest i486 machine running the OS/2 operating system.

Installing 4DOS is easy, via an automated installation program. If preferred, it can be installed manually. The installation will alter both the CONFIG.SYS and AUTOEXEC.BAT files, but will rename the original files first, in case anything goes wrong. When installed, 4DOS is completely transparent. In fact, apart from the start-up message, there is nothing to assume you have anything but a standard copy of MS-DOS on your machine, until you start to use it.

4DOS has many advantages over COMMAND.COM, noticed when typing in commands. Some of its advantages are immediately obvious when the machine is used, but many are subtle but powerful changes in the commands, which exploits the power of DOS to a much greater extent than COMMAND.COM has ever done.

One of 4DOS's most useful features is the fact that it remembers the last 1024 characters typed at the keyboard. These can be recalled at any time by using the up and down arrow keys, and reviewed by typing HISTORY. This is a superb feature, as many commands typed previously can be recalled at the touch of a button, rather than just the last statement that COMMAND.COM provides with the function keys.

On-line help is available at any time. A list of all commands available can be displayed by typing a ?, while a full help system can be accessed by typing HELP or pressing the F1 key. The help system can be controlled easily with a compatible mouse.

Another superb feature is a text viewer. No more will long pieces of text need to be loaded into a word processor to be seen properly. The limited TYPE command is rendered redundant: text can be scrolled and paged up and down at will, and also printed out. Unfortunately, this is only a text viewer, not an editor as yet, hopefully it will soon.

4DOS also provides a simple selection feature to list files and perform operations on them. For example, if you wanted to delete certain unrelated files in the current directory, before you would either have to delete every file individually, or use a program such as PCTOOLS or XTREE. Using 4DOS, the command SELECT DEL (*.*) will bring up a list of all the files in the current directory. A cursor can be moved around this list, tagging the files to be deleted; and when all the files you wish to erase have been tagged, 4DOS will delete them all for you, in much the same way as PCTOOLS or XTREE.

4DOS also has an enhanced batch processor, allowing, amongst other things, sound and input from the keyboard something that has been longed for in MS-DOS for quite sometime - at last I hear you cry!

In general use, 4DOS has a much more polished feel than standard DOS. Error messages are in plain English, and there are many more of them, telling the user exactly what has happened, rather than the standard messages that usually do little more than indicate that something has gone wrong. Messages also appear as commands are being performed, showing exactly what the machine is doing. Directory displays are usually sorted into alphabetical order, although this can take a second or two when using a XT type of computer.

All of the standard DOS commands are retained, but enhanced to allow more powerful operations to be carried out. As an example, take the DIR command. COMMAND.COM allows three versions of this command: DIR, DIR/W and DIR/P. 4DOS allows an amazing extra FIFTEEN variations of this directory command.

4DOS will locate itself in EMS memory, if fitted. If you have an AT class of machine, 4DOS will use some extra features on the 80286/80386 chip to speed up the processing of commands available.

Feature

One feature of 4DOS that will be appreciated by owners of PCs without hard disks is that it can be permanently installed in memory. As users of floppy drive machines will know, after running an application that takes up a lot of memory, COMMAND.COM needs to be re-loaded from the system disk. If this disk is not in the drive, the message 'INSERT COMMAND.COM TO CONTINUE' appears on the screen, and the machine halts until a system disk is inserted into drive A:. 4DOS usually does this as well, but it can be configured to stay resident in memory all the time. The only disadvantage of this is that more memory is taken up *(around 56K, as opposed to less than 5K for normal 4DOS or the regular COMMAND.COM)*.

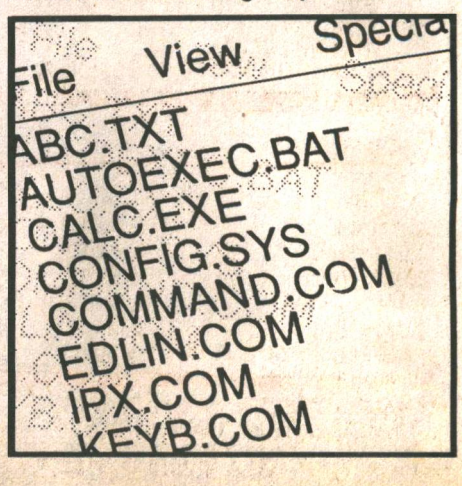
Almost everything about 4DOS can be altered, if wished, from the height of the cursor to disabling whole commands. An extremely powerful command *(ALIAS)*, allows a command or sequence of commands to be renamed. For example, you could tell 4DOS that every time you entered 'widedir' you wanted the commands CLS, followed by DIR/W to be performed.

For users who like to get involved in the intricacies of DOS, the usual pipes are available, plus two redirection error messages.

All of the above would be unimportant if 4DOS was not compatible with COMMAND.COM. I have encountered no problems with any software tried, including the latest releases of Windows and PCTools. It would be unfair not to point out the shortcomings of 4DOS. It's main drawback is a time penalty added to some actions when used on a slow machine. For example, on a 'turbo' XT, the machine will pause for up to 5 seconds between issuing a DIR command, and seeing the directory listing on-screen. This is because of the need to sort the directory before displaying it. Also, deleting multiple files takes much longer than normal. On a faster machine, or when EMS memory is fitted, this delay falls to a negligible level.

The above description gives only a taste of what 4DOS holds in store for the regular DOS user. I have only skipped through the commands above, and there are many more advanced features which I haven't even begun to describe. 4DOS will run on any system, using DOS versions 2, 3 or 4 *(versions 3 and above are recommended though)*. It will also word in the DOS compatibility box in the OS/2 operating system.

4DOS is distributed under the shareware scheme by J.P. Software, or any other major Shareware/PD library. A fully registered version costs less than £45 including VAT. Network licences are available, 4DOS is a superbly powerful replacement for COMMAND.COM, an almost essential purchase for users who regularly use DOS.



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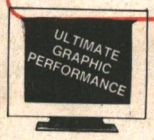

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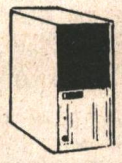

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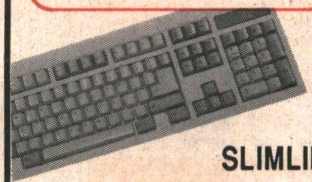

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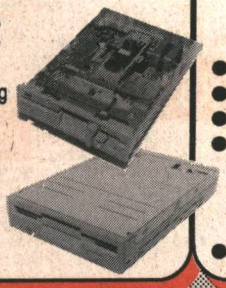

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IMAGE GENERATION and Processing On A Shoestring

Trevor Morrissey looks in to shareware image generation package at a price which is right...

So you'd like to try your hand at CAD *(computer-aided-design)*, drawing or desktop publishing? But the cost is prohibitive? Or maybe you haven't given it consideration because you haven't got a mouse? Well, your problems are well and truely solved! Read on to find out.

PC-KEY-DRAW *(version 3.51)* is your key to unlocking the world of image generation and processing. And you definitely don't need a mouse. The author, DED-WARE in U.S., states this clearly in the manual and my tests have confirmed it.

This is an excellent shareware product, comparable with may of the packages costing hundreds of pounds. It sports an awesome selection of features, allowing you to create a wide variety of graphics. Whether you're interested in graphical game design, mechanical design, graphic art, desktop publishing, map-drawing or a spot of architecture this program *(on four disks)* is all you need to have a go. And there's more... for the latest embodiment of the program features HyperDraw which is a graphical database system similar to the much vaunted Hyper-card on the Apple Macintosh.

CAD and desktop publishing applications are usually very cumbersome and memory-hungry beasts when it comes to running them on a modest PC. So what hardware requirements does one need to run PC-KEY-DRAW? The program will run satisfactorily on an IBM PC/XT/AT, Portable PC or PC Jnr. with at least 256K bytes of memory. Obviously, an AT machine will prove more efficient than a basic PC; nonetheless, it runs well on the basic PC.

A graphic card is essential, so plain old mono won't do - unless of course you fit a graphics card. A colour graphics card, either CGA or EGA is handy since the paint features allow the user to paint in twenty nine colours and to modify, shift and strip these colours to how you want them.

Dual floppy disk drives is the minimum system requirement. This is not the norm for a program of this kind, as most demand a hard disk. So, unless your machine has only one floppy disk drive, you can run PC-KEY-DRAW. Of course, if you have a hard disk so much the better in every way.

A mouse is not essential, but should you desire to use one a Microsoft or compatible creature is needed. The keyboard command structure is remarkably good, so you're at no particular disadvantage if you the cat has made off with your fury friend. I used the package for a few weeks and decided that it worked best for me without the aid of the ubiquitous mouse. But of course, you may think differently.

You have all the features needed to generate and process images. The great thing about PC-KEY-DRAW is that it combines the features of CAD programs with those associated with paint programs. Even free-hand drawing is possible.

The on-screen help is good and there is a fair selection of printer support. Multiple text fonts are included, making desktop publishing a viable proposition. There are a number of advanced features such as layering of drawings and an animation facility which must make PC-KEY-DRAW one of the most versatile programs available for such a low price.

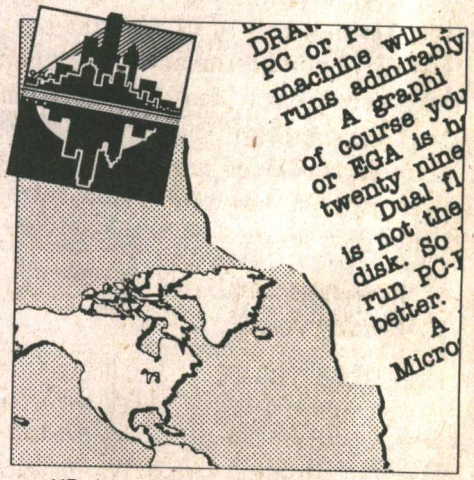
The drawing features are quite comprehensive. I was able to draw dots, continuous lines, parallel lines, spoke lines, boxes, rectangles, arcs, circles, ellipses, polygons, sine curves, rose curves and so on. It is possible to alter the thickness of lines and I found it very helpful to ask the computer for line length, angle and position. Freeform curve drawing is the result of the program's facility for fitting a curve to points. Of course, you can also erase, you can zoom, pan, shrink, replicate, rotate to any angle, even mirror *(horizontal and vertical)* slide and you can overlay.

Painting

Painting can be great fun. The user can utilize twenty nine paint colours if a colour graphics card is fitted, shade circles, shade boxes, shade polygons. You can fade, colour modify, shift colours, strip colours, and there's an interesting reverse video feature as well. The machine I used did not sport a colour display so I am not able to comment on the use of colours by the program, I am sure it is good though.

Desktop publishing is very feasible with this package. Multiple text fonts are provided and theres the facility to create and save your own fonts. Add to this the file importation facility and some very interesting possibilities come into being. Text must be imported as an ASCII file but this will hardly hamper your endeavours since most word processors allow this. The ability to manipulate text *(centre it, justify it right and left, place it vertically, and so on)* is really quite good. If you've got hitherto latent talent in desktop publishing, PC-KEY-DRAW is sure to bring your talent forth.

A working selection of clip art is included with the program and much more is provided if you decide to register. A great plus, however, is the facility to create, use and re-use your own clip art. So it's a simple matter to create and store a library of symbols you might wish to use on a more than regular basis.



HP Laserjet support is available on registration, so if you are serious about publishing that newsletter or promoting your local charity or club, then you'll do well to register as soon as possible.

Some of the more advanced features include key macro commands which make it possible to create simple but effective slide shows, save regularly used routines and figures, create libraries of pictures, screens, patterns and so on.

By far the most innovative of the advanced features, is a database system similar to HyperCard for the Apple Mac. This is called Hyperdraw and lets you organize pictures, text and macros for easy retrieval in a tree or stack type fashion. This is a wonderful way for organizing many different types of information which includes pictures and text. It is quite feasible to create interactive slide shows, picture databases, and so on. The uses are almost endless depending on your imagination.

The tutorial disk is a very good example of Hyperdraw's capability. It provides an excellent interactive tutorial for PC-KEY-DRAW that can guide the novice through all of the basic functions of the program.

It is essential to get version 3.51 of PC-KEY-DRAW. Earlier versions are still available in the UK. So be sure to ask for version 3.51 - don't settle for anything less! This is one instance where there is genuinely a great difference between version 3.51 and earlier versions of the program.

The program comes on three disks and there's an optional library disk, it's worth getting this. Besides bug fixes, speed increases, and menu enhancements, there are a number of major changes to version 3.51 of the package. The following are the most significant of these. Joystick support is now available. Joysticks motion mimics cursor motion and can be recorded in a macro. Mouse support has been significantly improved also. A file conversion utility has been added to con-

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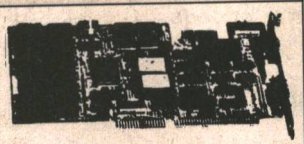

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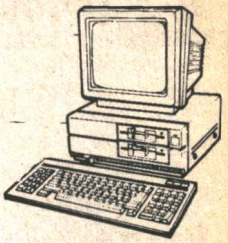

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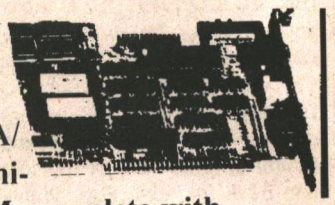

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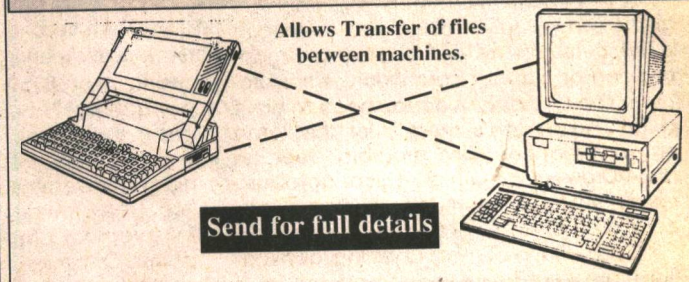

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IMAGE GENERATION and Processing On A Shoestring

vert SCN files used by PC-KEY-DRAW to IMG format used by GEM and a number of desktop publishing programs, such as Ventura Publisher. This should be good news to all Gem fans. There is a host of other interesting and power-enhancing features. A reverse video command for animated objects is available. FATBITS is more versatile, allowing scrolling. Full path support is a welcome addition.

Until now, if you used a NEC Multispeed you could not run PC-KEY-DRAW. But that's no longer the case. A fix has finally been found. For the really adventurous and pioneering, there are quite a few undocumented features *(features not mentioned in the manual - at least, the one I had)*. So there are quite a few surprises to add to the feature-packed package outlined above. However, if you are not that way inclined the program is perfectly adequate without these.

Registration

Registration costs a modest US $100 and brings the latest version of the program, support *(including mail)*, updates at cost, a 120-page indexed manual and binder, Laserjet printer support and a number of very interesting library disks: 1. clip art and slide show demo; 2. clip art, 600 fill patterns and draw demo; 3. text fonts and text formatting macros; 4. additional fonts, flow chart symbols; 5. one key auto flow charting and additional fonts; 6. Hercules support disk with CGA emulators; 7. interactive tutorial disk and 3-D maze game.

It is interesting to note that several registration options are available. Besides the full registration outlined above, it is possible to drop the support option and to registration for US $70. And if you really fancy groping your way around without either support or a manual, then you can register for US $40. Finally, there is no charge for Hercules once you register *(whatever option you go for)*.

The author of PC-KEY-DRAW is **Edward Kidera, PO Box 595 Columbia, MD21045-0595.** PC-KEY-DRAW is distributed as shareware, so you can try before you buy. The author and his company DEDWARE do not restrict distribution of shareware versions and there is no copy protection. So you are free to make copies of the disks and send them to your friends to try. PC-KEY-DRAW is to be highly recommended. And that's something I say only very rarely! **You should be able to buy this via the usual shareware channels, failing this, there is always the Author to contact in the US. The four disks cost around £12 including VAT in the UK..**

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DO YOU NEED A LASER?

Jim Tyler puts a bargain-priced HP Laserjet II compatible through its paces...

Having been involved in computing for some years, I can clearly remember the time when laser printers first reached the UK market. Costing roughly the same as a family saloon car, these were printers for Big Business and for the very richest of enthusiasts. Even then, some pundits were suggesting that one day laser printers would be available at prices which would make them affordable to the smallest of businesses or even for the enthusiast. That day has arrived.

There is now a good selection of high quality lasers to be had under the £1000 mark and, perhaps more importantly for the bulk of us, there is a smaller but still worthy selection for far less than a thousand. In fact, the price of the Dataproducts LZR 650 which is sitting on my desk quietly humming to itself is just £599 - for which you might have obtained a better quality nine-pin dot matrix at the time lasers first appeared! The printer arrived courtesy of newly-formed Krest Computer Products of Wincanton, Somerset.

The LZR 650 will work with just about any program you care to mention, as it has HP Laserjet II emulation plus Epson FX80, IBM Proprinter and Graphics printer and Diabolo 630 emulations. As the laser sports both parallel and serial interfaces, you could hook this up to just about anything. This could prove invaluable to businesses and institutions which have an installation of older computers running early software with limited printer drivers.

Setting up the printer straight from the box proved no problem, although the manual could have been given rather clearer illustrations of the insertion of the drum and developer cartridges and the toning kit. However, I'm a novice, never having been inside a laser before, yet within ten minutes of opening the box, I had it up and running.

Eight membrane switches on the front panel allow you to select the emulation required, number of pages to be printed, and so on. The manual instructions for these operations were - in contrast to the setting up instructions - clear and easy to follow. Pressing the Menu key for five seconds brings the configuration menu for setting National character sets, interface, emulation and so on. Pressing the Menu key momentarily brings the print menu for setting number of copies, paper size, font number and automatic feed or manual feed for envelopes or whatever.

To somebody like me who has used dot matrix and daisywheel printers for many years, the laser is a revelation. It gives daisywheel quality print when used from word processing packages, but at very high speeds and without print density being affected by the condition of a ribbon. Like the dot matrix, the laser is capable of graphics but at a far higher definition than the former as laser dots are minute in comparison with the impression made by a dot matrix wire. It is with graphics that the laser really excels; and if you're into DTP packages which treat all text as graphics images, then there really is no comparison between the laser and even the finest 24 pin dot matrix.

Although many 24 pin printers can claim 360x360 dot resolution which appears to eclipse the normal 300x300 dots of laser, the large size of the dot matrix dots still cannot give the clean edges to characters that the laser is able to achieve.

Another consideration for the DTP'er is that of multiple copies. I produced a poster for the Parish Council and they requested several copies. With my trusty Mannesman Tally 85 I was faced with the choice of either producing a high quality master for photostating *(which usually gives fairly poor quality results)* printing in the faster but poorer quality standard or draft modes offered by the program, or printing the lot at high quality on the dot matrix at twenty minutes per copy! With the laser I would have been able to tell the printer how many copies I required and, once it had placed the necessary data in its memory, it would have churned out the posters at the rate of six per minute.

The Dataproducts LZR 650 has .5Mb of memory onborad, which is upgradeable to 1 to 4Mb. It is worth pointing out that with graphics-based software .5Mb is enough for only approximately one-third of a page of graphics. In order to produce a complicated document you need 1.5Mb on board in order that the printer itself can contain the complete image for the whole page in memory. If the memory is insufficient, then the printer will take in data and, once the memory is full, it will print out what it has *(a whole sheet in one go)* before taking in more data and printing this on a separate sheet.

In contrast, a dot matrix or ink jet can print the most complicated graphics without having enormous amounts of memory because it prints the page line by line.

Krest will be supplying memory expansion cards for the Dataproducts, in addition to a wide range of font cards. The printer has two slots for font cards. In addition to the manual paper feed and the 250 A4 page cassette, optional cassettes for envelope and B5 paper feed will be available.

Weights and Measures.

The Dataproducts LZR 650 weighs in at 33.5lbs, and measures 13.4" width by 14.2" depth by 10.9" high. There is a face-down top output which should handle 520 sheets and a fold-out tray at the rear of the machine which gives straight through paper feed for handling envelopes etc. With the face-up tray folded out, 12" of clear space is required at the back of the printer, and a clear 4" to the right and 8" to the left of the printer are recommended, so that the printer should occupy a desk space of 26" depth by 25.5" wide.

The printer is quoted as having a warm-up time of 60 seconds; in practice, this was far less even on a day when it was minus 5 degrees outside and *(seemingly)* only slightly warmer in my office. The maximum time to first print is 23 seconds *(using built-in fonts)* and the monthly duty cycle is an impressive 3000 copies.

Print quality from the Sharp engine is excellent, as can be seen from the print sample, produced using Avagio DTP software which gets the most from any printer but, more importantly, demonstrates the density of solid black produced by the laser.

Not everyone uses DTP. When the LZR 650 is used with a normal word processor package in any of its emulations, it is like having a very quiet, very fast daisywheel with sheet feeder! If any readers are confused by all the hype which surrounds lasers the message must be to ignore most of it, for once the laser is connected to your PC and speaking the same language as your current application, it simply quietly gets on with doing its job, you hardly ever have to touch it, apart from turning it on and off.

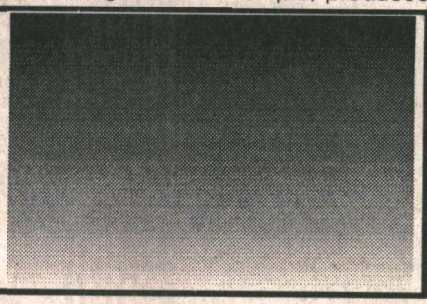
Most software packages nowadays come with a range of printer drivers which will allow you to select more than one of the LZRs emulations. You will get the most versatility from the Epson FX80 or IBM Proprinter emulations, unless you care to fit HP font cards. All of the internal fonts within the emulations can be printed in horizontal or landscape orientation.

I could find no clues to explain the low price of the LZR 650, it is not obsolete nor does it appear to have any shortcomings in quality or performance. It must therefore be due simply to the buying power of the vendor's parent company.

The £599 *(excluding VAT)* even includes 12 months on-site maintenance. It is, as far as I can tell, a real bargain. **For more information on this bargain laser printer, contact Krest Computer Products on 0963-34800.**

Dataproducts LZR 650 Printout

Note solid black of text and smooth graduation of shading.



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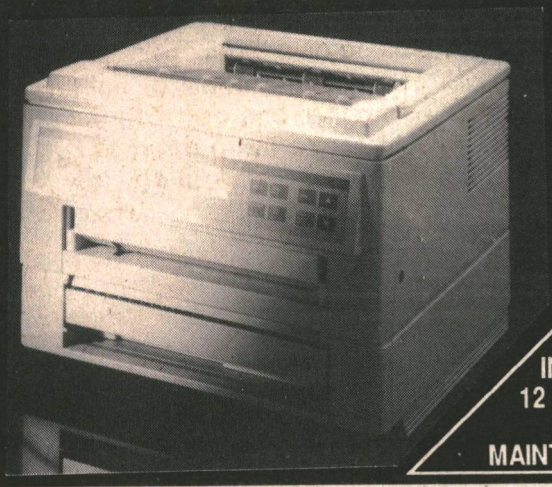

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Thinksheet

Sandra Vogel looks at the ThinkSheet database program...

If you are anything like me then you have a lot of information stored in your computer. In my case, this information ranges from address and telephone lists to large data sets, each record containing a reasonably large block of text. Up until now, the chances are you have had to use different programmes to cope with different types of data that you have. That means you have to learn to use different commands, and often find yourself using the wrong commands in the wrong programme. ThinkSheet claims to be the end to this rather irritating problem.

ThinkSheet offers a database with records of user defined size and contents. More than this, though, ThinkSheet allows a unique three dimensional approach to database management, which widens the range of uses to which the programme can be put. As the manual rather eloquently puts it, ThinkSheet is a "huge and flexible scaffolding system", which allows you to structure and organise your thought. Indeed, the number of uses to which ThinkSheet can be put appears to be limited only by your own inventiveness and imagination.

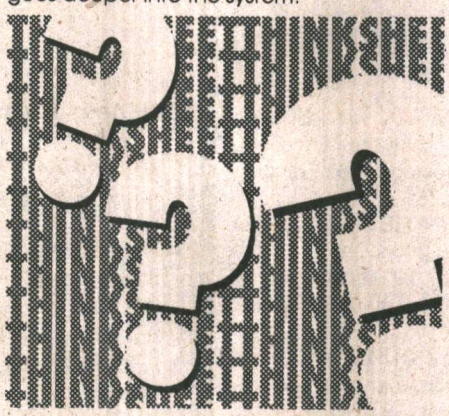
Applications range from the setting up and maintenance of simple databases, like storing the ubiquitous telephone numbers or addresses, to much more complex organisational functions which could include setting out the structure of a book, or a plan of action. Examples in the manual include a novel educational application which runs on a questions and answers basis, each level of the database representing either a question or its answer for example.

Indeed, it is in this three dimensional use of ThinkSheet where the programme really comes into its own. Telephone listings on computer are usually no more than duplications of telephone listings on a card file. They are usually sorted by name, and one sequence is all that is required. Plans of action, or records of information will often require cross referencing which is very difficult and time consuming to achieve by hand. On a computer, however, this can be done easily and quickly - with the right software. ThinkSheet aspires to be the right software.

Even working on the one dimensional level, ThinkSheet offers some features you may well have found yourself wishing for in other situations. For instance, you can cut records in two and paste them to other records - ideal for keeping track of ideas if you are writing an essay or something longer; you can make an exact duplicate of a record and move it to a different part of the database or join two records together to make a new one from ones made earlier.

3D

Using ThinkSheet in three dimensions, you will need to make cards into 'doors' which open into other levels of the file you have created. This means that you can set up a sophisticated cross referencing system with ease, so ThinkSheet can help with organising all kinds of information from diaries and address lists to project plans. You can even copy individual records to different levels within the same database, which allows for the possibility of repeating whole chunks of relevant information at whatever location they may seem relevant. 'Doors' are simplicity themselves both to create and use. A 'door' is represented by a triangle in the top left hand corner of a record. If it is pointing upwards, then the 'door' goes to a higher level of the database, it points downwards, the 'door' goes deeper into the system.



If you are working on something as sophisticated as a report plan ThinkSheet lets you join separate records together to form continuous text, so that there is no need to retype everything. If you are keeping an address list, ThinkSheet lets you print out individual records on continuous cards or paper *(even personal organiser sheets)*. Additionally, anything you produce in ThinkSheet can be saved to disc and imported into your favourite word processing package.

Of course, working with databases this big, the size of the screen will present you with severe limitations. There is little that programmers can do about actual screen size, but the ThinkSheet does allow you to scroll up and down the screen at will, though it is much easier on the eye if all relevant information can be kept on screen at one time. Screen Size is a particular problem if you have to work in CGA mode, though ThinkSheet supports all the usual alternatives - CGA, EGA, MCGA, VGA and Hercules. Setting up this and other defaults is achieved via an easy to use menu driven startup programme included in the package.

ThinkSheet is compatible with a number of other programmes. PC-Outline files are automatically recognised and loaded as three dimensional structures, while WordStar files are also compatible. Any ASCII text can be imported though each sentence is then loaded as a separate record card, so you will have to be prepared to spend some time reorganising the structure of your database if you chose to import in ASCII.

Unlike many database programmes ThinkSheet has been put together with the needs of the user in mind. It is very easy both to put data in and then to get data out again. One of the touches which help to make it more than the average programme is the ability to customise the language. This feature turns ThinkSheet into a real Europrogramme as you are able to choose not just between English French and German, but between these and Danish, Dutch, Portuguese, Spanish, and Welsh.

As you may have guessed, ThinkSheet is really intended to be used with a mouse. However, the alternative directional keys worked perfectly well on my portable, and lack of a mouse would not appear to be a disadvantage. My main gripe is not with the programme at all, but with the manual's attempt at a combination index and glossary. Like most devices that try and do two jobs at once, this doesn't really work. Many users may find it is a little confusing. However, the manual is short enough that this should not be too much of a problem, and I certainly don't think that it should put you off thinking about using the programme.

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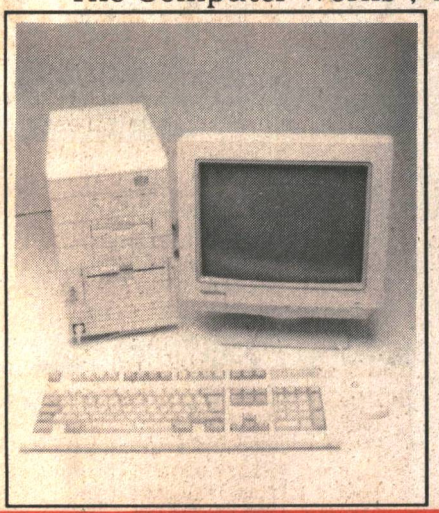

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CAHMAT£R

Evelyn Mills looks at the Cashmaster accounting package for the ST and other machines...

Perhaps you are searching for an accounting system based, not on spreadsheets, but on simple and flexible ledger type basis with multiple functions. In this issue, Evelyn looks into such a package.

Cashmaster certainly provides the answer here and is available for IBM and Compatibles, all Amstrad PCWs, Amstrad CPC 6128s and the Atari ST 520 upwards. For those with Hi-res monitors, a conversion procedure is supplied. The program review written here is for the Atari, but is virtually identical with the other computers specified; the main difference lies in the creation of a default 'Noname' file on loading the Atari program. The title of this file may be changed - remember then to have a back-up program disk open for file writing immediately on loading. Other default settings are Page Length, Paper Type, Max Records and VAT Rate. All of these may be changed using a Set Up option described later.

On loading, the ledger screen is immediately apparent plus a coding system and pull down Menus. The File Menu contains load, merge, and split file options, the directory listing and two very important facilities - renaming files and a Setting Up option which is associated with changing the default settings listed above. A Statements Menu is discussed later while the Miscellaneous Menu controls multiple functions such as editing codes, find entry, tag/untag, edit line, insert line, delete line and a calculator with five functions (+,-,*,/ and %). An external calculator program is also to hand for independent loading. All of the functions listed in the Menu may be handled with a single key-stroke or by simple mouse control.

Cashmaster may be used for home or business accounts. Any accounting system requires pre-planning with respect to the most efficient design; before making any entries, I found it most useful to set up the CODING SYSTEM first of all. To create or edit codes, simply click on 'edit codes' - you will then be advised that a Class Code may be entered with a 'C' keypress, while an Account Code requires an 'A' press. It is simple enough to toggle between the two using the same letters. All coding is numerical *(01 to 99)* and now it is up to you to type in the requities which will automatically appear in the ledger. Let us suppose that you are running a small business - select CLASS CODE and here you could enter all the essentials which you are handling such as total stock, selected stock, sales, firms, travel expenses, petrol, credit and debit entries and so forth. Any statements typed here *(maximum of 10 characters)* will appear automatically in the Class Column of the ledger display when the corresponding control code is entered. The next logical step is to enter into ACCOUNT CODING; on selection of 'A' a screen similar to the Class Code is displayed - entries here should relate to the sources of your cash flow such as Cash, Cheques, Credit Cards, Cash Cards etc. Account coding allows for 20 entries with 10 characters for each entry. EDITING for Code controls is very simply handled in the edit mode, using the delete or backspace keys while exit to the main ledger is via the trusty old Escape key.

On now to the LEDGER entry system itself - an important point to remember is that 'I' is for insert and 'E' is for edit; initially the Receipt and Payment Columns headers may be changed here to Credit and Debit or other such titles via the Set Up option - just remember that the receipt is for INCOMING finance! Press 'I' and proceed to make your entries along the row pressing return after each entry - this automatically moves insertions on to the next column. If you have set up your class codes as suggested enter then where relevant and the program will do the rest. A return on VAT entry inserts a 'Z' for zero payment. If you have nothing to enter in the Credit or Debit columns, 'return' will enter zeros at a later point in the program.

Lines may be edited freely, inserted or deleted; standing orders and regular payments may be entered as repeat entries by placing the cursor alongside the required entry and pressing 'R'. A Menu now appears with annual, half-yearly, quarterly, monthly, fortnightly or weekly options to choose.

Tagging is another very useful function in Cashmaster. Perhaps you wish to highlight an entry for one reason or another - simply place the cursor alongside selection and press 'T' to give an asterisk against this entry. Inasmuch as virtually the entire program may be controlled by single key passes it is hardly surprising to discover that 'F' will find any entry via a search string.

Other facilities include scrolling through the entries with the cursor keys, going to specific lines and a page function which will show you all your class and account code listings; also blocks or sections of the accounts may be listed as required.

Choose 'S' and you are now in Statements mode with three types of full screen display: 1) Detailed Statement with a running balance; 2) VAT Statement *(VAT paid and payable with a summary of what is due to the 'VAT man')*; 3) Profit and Loss summarises all the class codes, lists the classes in terms of purchases and outgoings, together with the overall total expenditure. A display of Net Profit is also calculated with ease.

All of the above may be directed to screen display, printer output or Disk File - the latter is an ASCII file with a .TXT extension. Epson printers are supported and it should be noted that there is a form-feed of a full page before printing starts. To save a ledger file simply use the escape key and follow instructions for quitting the program - your file will be saved automatically, updating any file of the same name on disk.

Overall, this is a very flexible program indeed and is suitable for both small businesses and home accounting. To summarise, the most appealing characteristics are the single key stroke commands, the ease of amending, deleting or insertion of data, the ability to create and amend your own coding system, the selection of any number of entries from single lines through to complete accounts and, last but certainly not least, the overall assessment of accounting and VAT rating as described for display on screen or output to the printer. The Manual is straightforward and readily understood. An inexpensive flexi-program!

CASHMASTER is available from Intraset Ltd., 10 Woodside Avenue, Clayton-le-Woods, Chorley, Lancashire PR6 7QF at a total cost of £29.95

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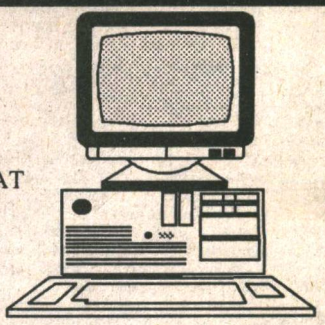

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THE SOFTWARE Greats

PART SIX

ANTHONY ROBERTSON PRESENTS A CONTINUING REPORT ON HIS EXPERIENCES IN THE SECOND HAND COMPUTING MARKET.

In the last issue of Micro Computer Mart I digressed a little and spoke about some hardware I had recently acquired - the SAM Coupe. In this issue I shall be strolling along memory lane with topics relating to a wide variety of yesterday's 8-bit and 16-bit machines.

As you may have guessed by now, I am a bit of a utilities 'nut' - from the earliest days of Sinclairdom up to this present day, I have always been on the lookout for tools to manipulate and repair files. I well remember turbo loading programs that I used to speed up my old Sinclair Spectrum - in the days before the Microdrive became available. Of course once the Microdrive became available, I had no hesitation in buying one.

Having no idea about disk drives then, I naturally assumed that the feeble 100K+ storage of the Microdrive cartridge was the state of the art of technology as we knew it at that time. What a poor fool I was! The data transfer and storage potential of the *magical* microdrive was really quite limited - even at the time of it's launch.

I quickly became disillusioned with this method of storing data as I found them to be totally unreliable in the long term *(for long term read 6 months)* and so I reluctantly returned to compact cassette data storage. Of course the baud rate of data transfer with the Sinclair loading system was extremely slow - though not so bad as the Commodore 64 or the BBC B. (Though the BBC B was more tolerant of tape head alignment and had a capability to recover data and continue loading a program, while the Spectrum would crash at the slightest misalignment).

I returned to using Microdrives only when 'tools' became available to retrieve data successfully - by that time of course I was already moving on to a disk based BBC system whose Disk Filing System already possessed some pretty powerful tools *(the BBC B)*. Oh yes those were the days when I contemplated buying a Sinclair QL - but you guessed it, the BBC won because it would readily accept a fast external disk drive.

What price Nostalgia?

With the acquisition of a BBC, or BEEB as they became affectionately known, I experienced my first major data loss. I was using a word-processor called EDWORD, and one day after switching on, I found I couldn't load any text files to screen. In fact according to my machine, the disk was blank. Panic set in, and I rang up my local computer dealer for advice. After placing an order I took delivery of an early version of disk doctor - this cured my problem.

ADDICTION?

Strangely enough this ability to repair and recover files sparked off a strange addiction for me. I began to look forward to disk errors in order to give me the opportunity to try out my ever growing collection of file tools. The more difficult the data recovery, the more I enjoyed recovering it - it got to a point when I would deliberately ignore the effort saving facility of creating a backup just to increase the chances of suffering data failure. I even left the dust covers off my disks in a further effort to stimulate file damage. I was quickly cured though, when I was faced with a £100 repair bill for my Cumana drive due to dusty disks causing major head alignment problems thats life i suppose!

After that little episode I became much more observant of data safety - this was in the good old days when computer viruses were unknown and machine to machine *handshaking* and *interfacing* resulted in nothing more than data transfer! In fact the virus boom seemed to arrive when the IBM PC and PC-compatibles became readily available to the non-business user. Though I dare say there were some dangerous little files out there to make the life of BBC and other machine owners etc., a misery.

Well I have already spoken about the package called PCTools in a previous issue of Micro Computer Mart, in case you didn't know, this particular package is now into it's sixth version - personally I'll stick with my trusty old version 4.2. There are of course many packages available in the marketplace today which offer similar or even more sophisticated facilities than the original PCTools. The Peter Norton Utilities spring to mind. Of course all programs have to start somewhere, and I recently had the chance to look at a very early version of the Norton Utilities. Version 3.2 according to the appearance of it's menu screen.

The files on the disk I saw had dates varying between 1984 and 1986. It appears that such products are in a continual state of evolution, I suppose the 1984 files were retained in this version to accompany new programs with even more facilities. On starting up the program I was presented with a primary menu of facilities available to me.

Features such as file unerase and recover were available, but in comparison to similarly named products from the current version 5 of the Norton Utilities, they look primitive in comparison. Nevertheless, if you are in need of PC file manipulative tools, look out for the Norton series of utilities on the second hand market.

CLASSIC PACKAGE

The very earliest versions will probably sell for no more than £10 complete with documentation - they are limited true, but also quite useful. Their limitations can prove fortuitous too, as the more sophisticated products available today are much more powerful and able to wreak havoc if placed in the wrong hands. Like PCTools, I consider that version 4.2 was a classic and in the case of the Norton Utils, their 4 series are classics too - particularly version 4.5. *(This version can be picked up second hand for around £20).*

It's interesting to chart the progress of some of the Norton utilities. In the earliest versions a program called System Information could be used to tell you what type of machine Norton was running on, the DOS version in use, amount of memory consumed by DOS and TSR's, number of disk drives, and the amount of memory free - that was it really between 6-10 lines of information, useful but limited. Sysinfo has grown with the product, and in it's most recent incarnation it has become **SI** on Norton 5. There is a world of difference though - it is now a super sophisticated product able to precisely determine memory in/out addresses, types and number of interfaces and peripherals etc. It can even interrogate drives and perform bench tests on your machine if you want it to - do you want it to?

Regarding the benchmark aspect the original Norton Sysinfo program produced a reading of your computer's speed relevant to the IBM PC standard of 4.77Mhz being equivalent to an index of 1. Thus an XT ma-

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The fourth chapter is where the real work of assembling the parts is described. It includes many practical tips not published elsewhere. If the beast won't go when you have built it you need to read chapter 5!

If you already have a PC, but it has failed in some way, chapter six may help, whereas chapter seven deals with upgrades, to existing machines. Software is briefly discussed in chapter eight and there are Appendices with useful data. The book has 112 pages and is in paperback format.

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THE SOFTWARE Greats

PART SIX

chine said to be running at 9.54Mhz would be said to have a Norton index of 2. Of course this picture changes for the later generation of chips such as the 80286 and 80386 series. Interestingly this 'benchmarking' index seems to have changed in the more recent versions from Norton.

By way of comparison I ran the original Sysinfo program on a 16MHz 80386SX clone. The reading I obtained was 15.3 relative to the original IBM PC specification. When I ran the benchmarking program from Norton version 5, the picture was somewhat different. The program reported that the Intel 80386SX chip was in fact running at only 15Mhz and its speed relative to the original IBM PC was only 9.9 - confusing or what? Well I suppose it would be a safe assumption that the most recent version is nearer the truth. I am prepared to make a guess here though - and remember it is only a guess. I suspect that the most recent version of Sysinfo take into account 'wait state settings' and hardware limitations too, whereas the earlier versions may have assumed every machine was hardware identical and used a simple calculation based on the installed chip specification characteristics.

The unerase and disk interrogation programs provided by version 3.2 are usable but lacking in features, there does not appear to be any disk fixing facility either. This means that you can quite easily recover the majority of files that have been erased either deliberately or by accident from a disk, but if there is actual physical damage, you cannot repair 'fragmented chains' or reconstruct damaged File Allocation Tables (FATs). Though this version will tell you if there are damaged sectors.

We must also remember that irrespective of the vintage of any unerase program, if there has been disk saving activity since a file was erased, there is every likelihood that some of it's data has been overwritten by fresher files. In this case the recovery of such a file would have to be achieved manually - sector by sector or even cluster by cluster.

From a convenience and user friendliness aspect, the more recent disk utilities packages on the market, feature mouse compatibility, and enhanced graphical user interfaces (GUIs). These refinements improve the handling and speed characteristics of such utilities, and older programs seem quite unwieldy in comparison. Of course, if you have never used the most recent packages, you would not be aware of the limitations and probably be quite happy with a cheaply purchased second hand utility program.

In the next instalment of the Software Greats, I shall be digging up some Spectrum memories and reporting on a wide range of items that have passed through my hands recently - so stay tuned folks...

PROFESSIONAL VIRUS KILLER V2.0

Evelyn Mills puts a brand new release through it's paces...

Just released in March 91 is Professional Virus Killer (PVK) 2.0, written by Mike Mee and distributed by Floppyshop Pd. This virus killer can handle 477 different types of bootsector contaminants (pursued and identified by Mike over a period of two years - with due recognition given to extraneous information supplied); the end result is more than a virus killer, as the author has added extra procedures for disk handling and analysis.

The program runs on any ST *(520 upwards)* STE or TT computer and is suitable for both floppy and hard disks. Here, again, we are dealing with a Budget priced, highly professional program at £6.95 with a special introductory price from Floppyshop of £4.95 - for further information on the latter, contact should be made with this firm.

The Disk Manual runs to 82 pages - don't worry - it isn't all explanation! Apart from the details on how to use PVK to the full, there is a lot of general information on virus types and how they function, an extensive list of the above by name plus their source and attack point in programs. The manual is well presented for easy reading, is page numbered, may be scrolled back and forth or, on request, a specific page may be located. Printing is possible without recourse to a word-processor and, an excellent addition, ANY PAGE may be selectively printed. The contents are divided into 10 chapters in all.

On loading, you will find that the program may be run via GEM Menu control or keyboard. An automatic check is done on your machine when booting and it is most encouraging to find an evaluation statement that your machine is virus free. This preliminary check by PVK is a good psychological beginning to the effect that your COMPUTER is not contaminated. Should the reverse be the case the contaminant may still be removed - write to the author and send him a contaminated disk and the virus killer program which tells you so.

Right - you have loaded up and are now in the Menu mode. On selecting the Bootsector check, any infected disk will result in a flashing screen in mono and a red alert in colour; this is accompanied by a statement IDENTIFYING the virus - e.g 'This disk is infected with the Signum virus' *(one of the most common)*. Each virus type recognised may then be immunised; should an antivirus be present, it will also be recognised. A black and white flash in mono or a green flash in colour accompanied by an audible ping means that the virus cannot be identified. Should this be the case, you should select the 'Store Bootsector' option and save to a blank, formatted disk - then you should send this disk to Floppyshop for further investigation by the author.

A check on the Executable Bootsector is also available - here, on selection of a 'display' option, a complete screen of bootsector data is shown in either hexadecimal or ASC II as you wish. This display may be printed out. Should you find any weird messages, or nonsense scribbles there - immunise!! Again the authors would appreciate receiving copies of contaminated disks.

Viruses HAVE been found although the overall percentage is low - 11 traced to the bootsector via the 477 detectors available. It should be remembered here that executable bootsectors often contain coding necessary for the running of a program; this subject is handled in the Manual with advice on when and when not to immunise.

Bootsectors may also be examined as shown in the accompanying table; this facility may be taken further and such sectors compared with respect to stored files and the original sector. Any differences may be dumped to screen or printer.

While on the subject of bootsectors, demos are available to show what may be fitted into the 512 bytes of code available here - there are Atari logos scrolling through R and L borders, a Wobbly Text demo and a Logo with a synchronised scrolling background. Other features present are a **HELP** option for using specific keys if preferred plus extra functions not available on the Menu Bar. Connection to Drive B for external drive owners *(very welcome)*. The deletion and renaming of any files which you may have stored. New date and time, and a Blitter Chip on/off option.

The manual is well worth reading in detail, particularly with reference to the list of viruses found, their names and their point of attack - Swedish viruses are discussed with relation to the erasure of bootsector and **FAT** files; the **LINK** virus attacks **.PRG**,.**APP**,.**ACC**,.**TDS** and .**TTP** files and so forth; the viruses known to infect hard disks are also discussed.

PVK took some 2 years to complete by virtue of the tracing, identification and immunising procedures - a marathon task. Mike Mee will update the program as required and purchasers may expect a considerable rebate on the update. overall this is an excellent seeker and protector - informative and effective as well as allowing the user to investigate the bootsector for himself without recourse to the use of other programs. This product is available from:-

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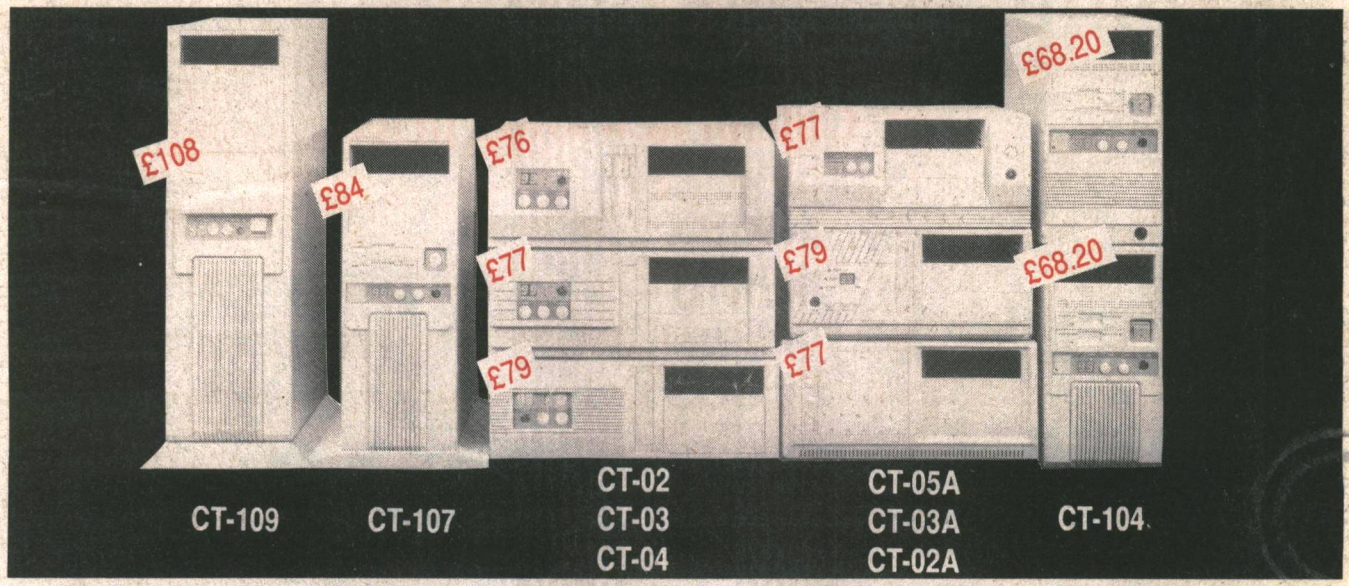

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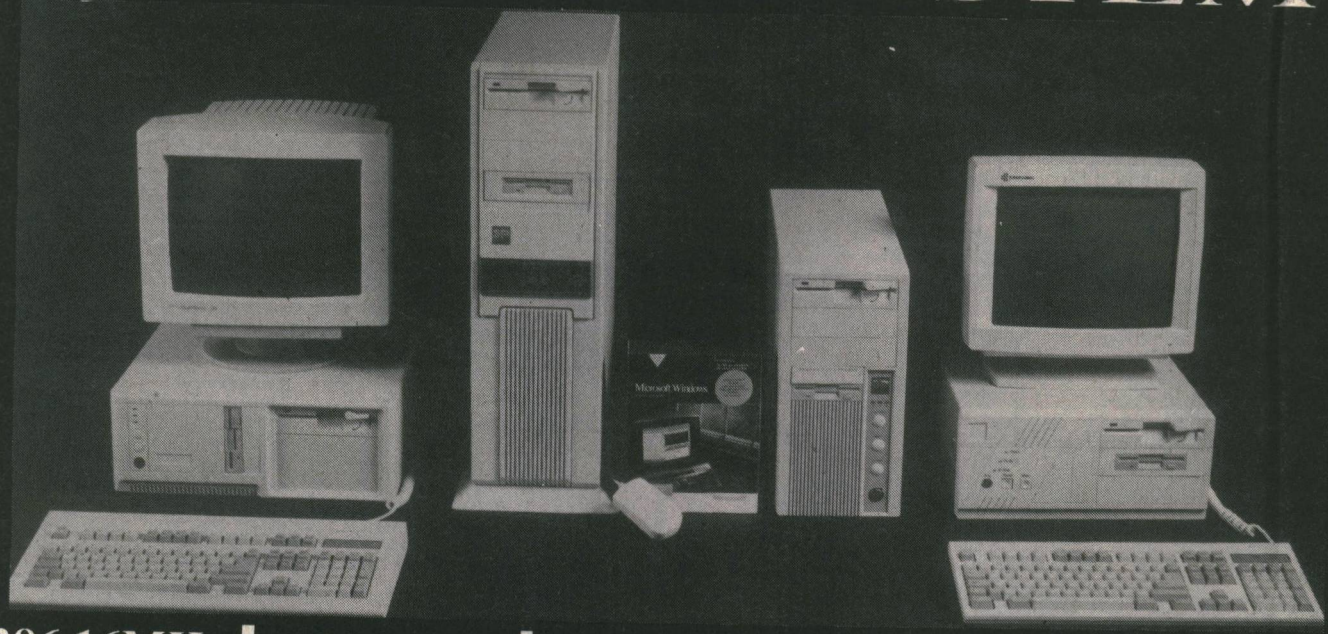

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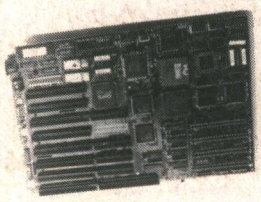

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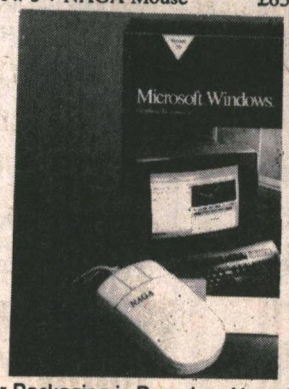

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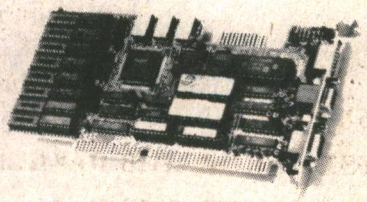

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NEW RELEASES

The State of Play

Henriques brings us up-to-date with all the latest news and gossip from the entertainment scene

In this issue Henriques examines what is on offer to potential games console purchasers. Firstly we take a look at some Computer Gaming News:

A new British company **GENISOFT** has emerged to give European Amiga users the opportunity to buy Amiga application software at a very reasonable price. Some have been imported from the States and are exceeding great value.

WEATHER WATCH allows you to analyse weather data. Two different graphs can be displayed and compared and with your own input you can start to make some predictions and turn yourself into a meteorological genius. **PRO CLIPS** is for users of desk top packages and contains some excellent clip art to give your documents the professional touch. Full reviews of their other products will be appearing in future issues of Micro Computer Mart.

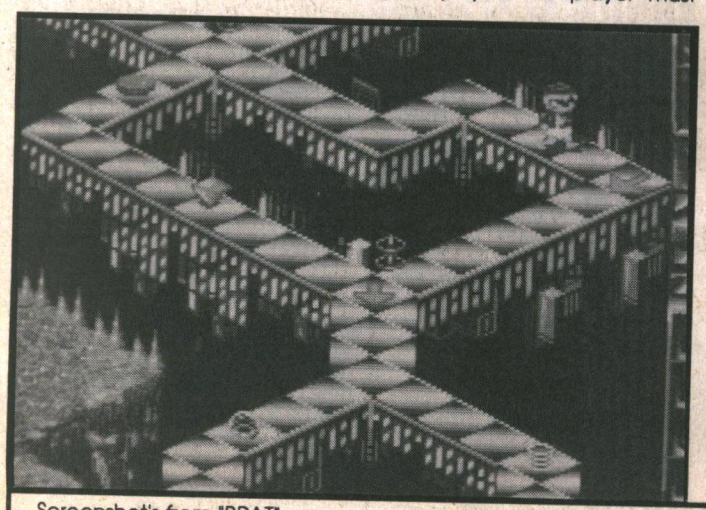
SIERRA are pleased to inform the public that from their base in Reading they are now running a 24 hours BBS hints line *(touch tone required)*. You can also download demos. 300/1200/24000 modem required. Their normal line is also open within office hours to answer any customer enquiries.

For all you 8-bit owners, **EXTREME** is now available, this is an arcade adventure from **Digital Integration**. The year is now 3021 AD - an alien space ship carrying Pioneer 10 has crash landed on earth leaving its self destruct mechanism operative. Your mission is to locate and disarm it before it destroys the planet. Solving tasks and finding weapons are just some of your requirements. Colourful backdrops and large sprites ensure an unforgettable visual feast .

BRAT from **Imageworks** is worth looking out for too. By day Brat is the most angelic baby you could ever hope to meet. But once he is asleep he starts to have the strangest dreams where he becomes a rough, tough, street smart Brat who roams strange worlds looking for all kinds of trouble.

But despite his tough exterior he is still a baby and has now lost all sense of direction. Consequently, you the player must control Brat and guide him to safety through the strange screens of toy town, the park and space world. This game features a unique mode of control which will make gameplay quite addictive.

Finally in this news report, if you are an Amiga ST user and you enjoyed the first two **Back to the Future** games keep your eyes open for **Part 3**. If you have seen the film you will be familiar with the scenario. There is plenty of action here too, with cowboys and indians and the US Cavalry - as you would expect, all featuring in the game.



Screenshot's from "BRAT"

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MAGICAL HAT

A colourful and zany cartoon arcade jaunt for the **SEGA MEGA**. This cheerful and fast moving game is full of mysterious surprises as you bounce, jump and dart through some of the most picturesque scenery imaginable like desert islands, mountains and large open ponds make life very difficult.

This is a platform game with plenty of inventive ideas. Making your way to a destination is eventful for as well as a host of little pests that get in your way you really don't know whether to jump up onto a ledge or fall down a hole.

You'll be surprised by some really clever animation that is implemented into the game.

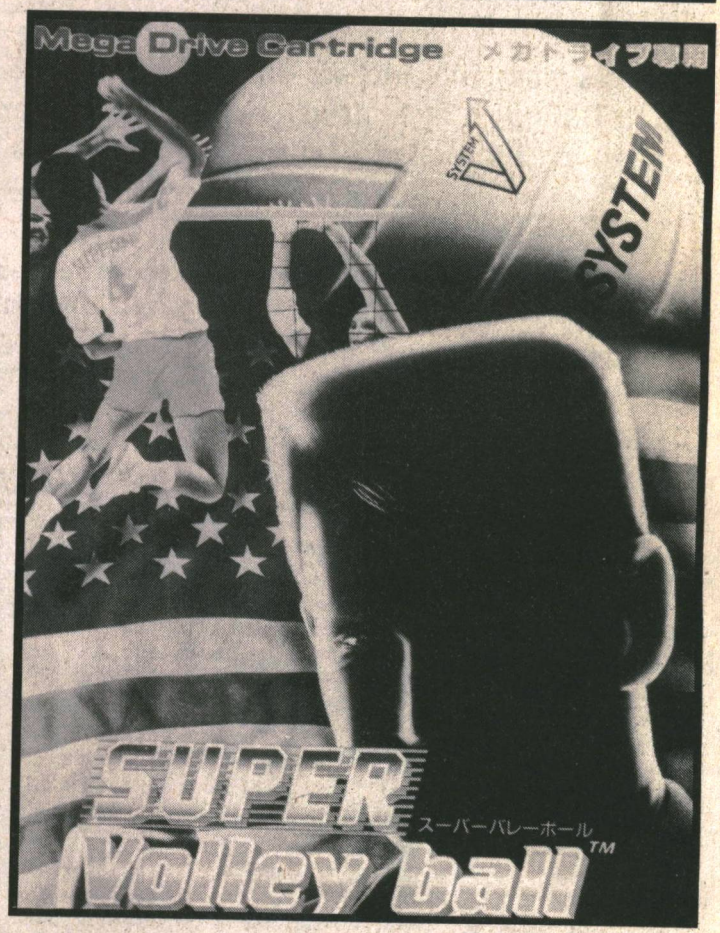
Large boxing gloves acting like springs will propel you up in the air to hopefully a more friendly environment. The Alladin boy you control has a cork screw punch and can jump out of some really tight spots with some clever propulsion of his legs that keeps him air bound for a few precious seconds, which can be advantageous if a nasty bug is waiting for you.

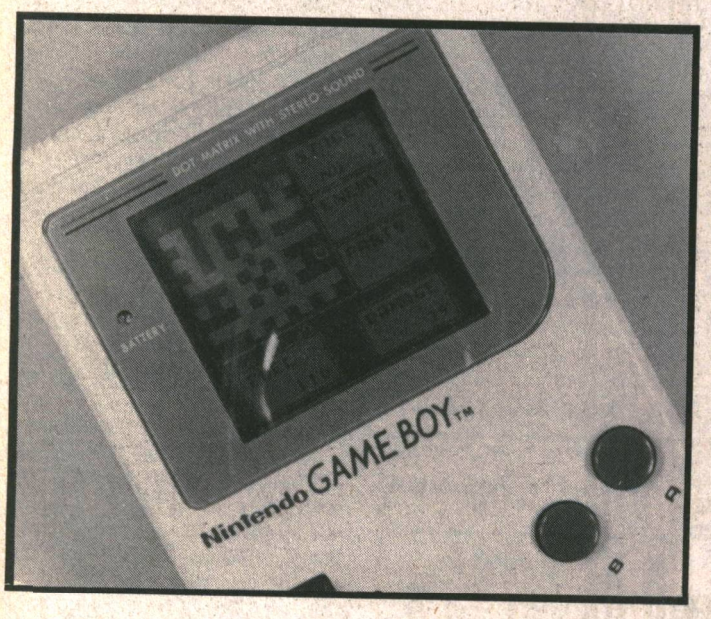
Once you get the hang of the controls you will be knocking out and flattening any one that dares face you. Extra special *pick-ups* make play even more exciting, but be warned the game is reasonably hard. There are shades of Mario Brothers and Rainbow Island here! A jolly sound track adds to the overall effect, is one of sheer sillyness. Thanks to **Disk Drive, Unit 24, Chatham Market, Chatham, Kent, England. Tel/Fax: 0634-407593** for supply of many of the latest **SEGA** samples.

Gameplay	75%
Presentation	85%
Value	80%

Super Volley Ball

Available for the **SEGA MEGA** this is one of the best and most responsive games of it's type I have yet played on any system. Although there have not been many renditions of this game about, it is very hard to see how it can be improved. The movements of the perfectly sized team players are as graceful and agile as can possible be programmed. To start play you view the server at the base line and the whole screen scrolls horizontally as the ball loops over the net. The opposition players are crowded against the next waiting to just pass the ball back but usually the serve reaches the base line of the opposition and a free player is ready to drive and try to keep the ball in the air. The next move really depends on your skill level. You can either lob the ball straight back over the next or subtly place near the your team players fro them to either make a smash shoot back or pump it in the air for the third touch to be then sent back. The console opponents is as good as you choice but as usual it is great to play against a friend.





We are indebted to **Telegames**, the largest console dealers in Europe, for material reviewed here. **Telegames** will be supplying Henriques for Micro Computer Mart, with sample games for review. For the latest releases either call **Telegames** on **0533 880445/813606**, or write to them at **Wigston, Leicester, LE8 1TE, England**. Please mention Micro Computer Mart when you make your enquiries.!

Gameplay	91%
Presentation	90%
Value	92%

DJ BOY

This game is available for the **SEGA MEGA** console. If you fancy some tough fighting on roller skates this might appeal although it gets extremely hard after only a few scenes. Skating along minding your own business a group of bullies head your way and start making the game play quite rough.

With an exerted effort of punching and kicking you see them off with consummate ease. Along come more groups and the same action is required. A few fatal hits and you can say goodbye.

Moving alongside a tramcar a very pretty girl starts chucking bombs at you and avoidance of these is your prime objective in this game.

When it stops off pops a rather large lady and with one swipe, turns your lights out. This must be one for the experts players. Graphics are cartoony and very pretty with an overall 'Californian' flavour.

Gameplay	69%
Presentation	70%
Value	68%

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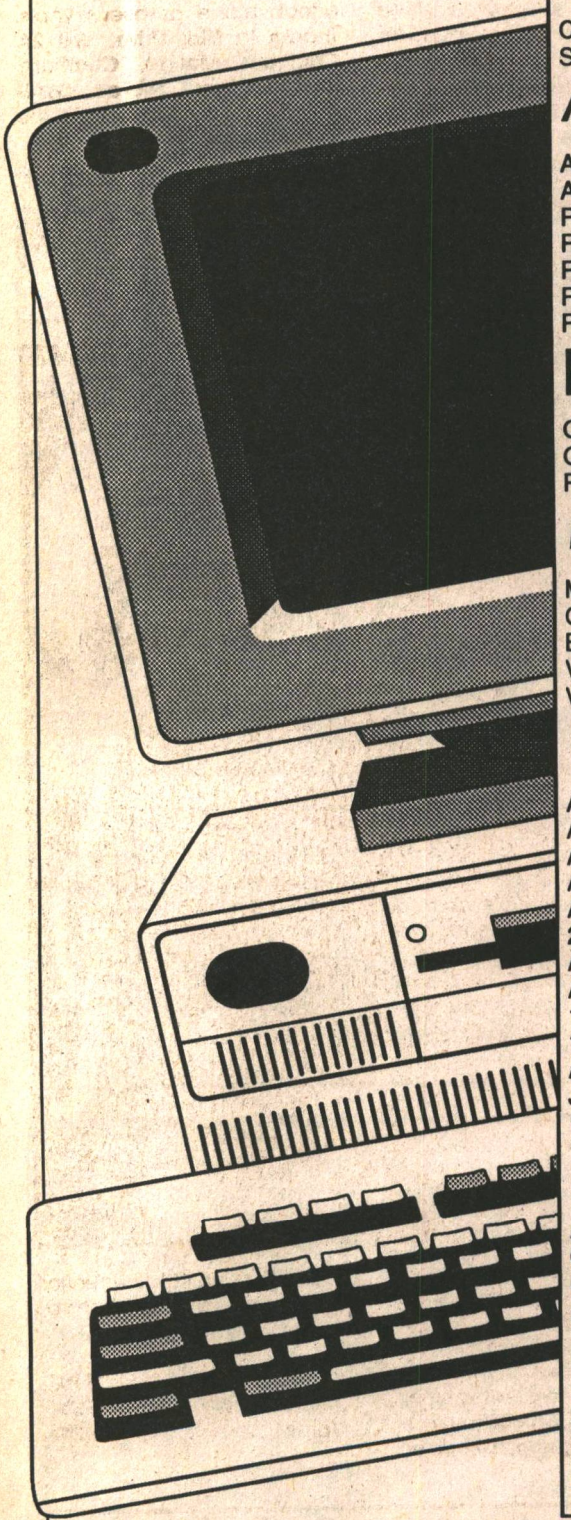

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SUBMARINE ATTACK

Another game available for the SEGA MASTER a rather grandiose title and more suited to the 10-12 year olds. You take control of a rather small submarine and move underwater shooting at nine other submarines and sea monsters. It starts off tame and only the end of levels are a real challenge. The first large assault being a underwater arsenal of gun and missiles moving along a seabed installation. Controlling the sub whilst firing at the moving guns and staying clear of trouble causes some mayhem. Helicopters and ships drop land mines and torpedoes but you can surface quickly to send barrage bombs in the air to hit either. Later level steering becomes more precise as you must not touch the rocky caverns otherwise damage is done. Collectable icons add to your resources. Nothing special about this 'shoot-em-up' giving the impression of a marine war game!

Gameplay	50%
Presentation	45%
Value	40%

RAY THUNDER

Also for the Nintendo Gameboy. This is a very simple plot for what is basically a maze game.

Although you take control of one of three flying craft, movement along the alleyways seems to on foot as you are at ground level, flying at speed!

Your task is to find a specific number of parts and the enemy whilst making sure you do not sustain much damage to your particular vehicle.

Moving along the corridors depletes your fuel supply but luckily extra canisters can be randomly found.

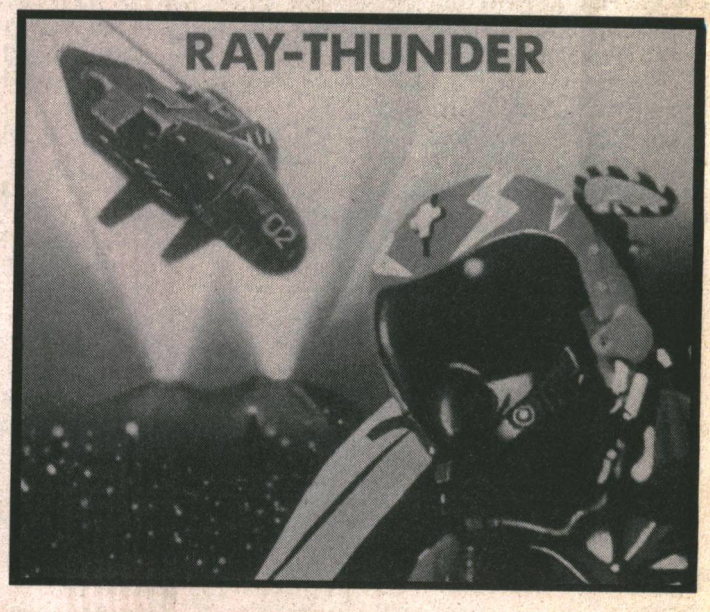
A first person perspective views the action and the geometrical shape of the mazes are just made up from straight lines without any embellishments.

As well as the game screen, you can go into a radar display and see where in the complex you are and also detect the rapidly moving antagonists as well as spotting extra pickups.

The game gets progressively harder and has two player option if you really need them.

Onscreen icons and numbers also keep you well informed of overall damage sustained, fuel levels and your enemies.

Gameplay	90%
Presentation	90%
Value	90%



PAPERBOY

Available for the **SEGA MASTER** console. The official version of this great game appears courtesy of US GOLD and although some may say that it would have been better on the MEGA for once that cannot be said.

Everyone knows the game, where as a paper boy you have to deliver the papers on your bike, whilst keeping out of the way of pedestrians, dogs, workman and cars. Ina ddition to all these obstacles you must finish a total the 3 selection levels manoeuvering through an assault course. 7 paper rounds, 11 scenes make this a must for your collection. This game is still as fresh as the day it first appeared in the arcades.

Gameplay	88%
Presentation	88%
Value	88%

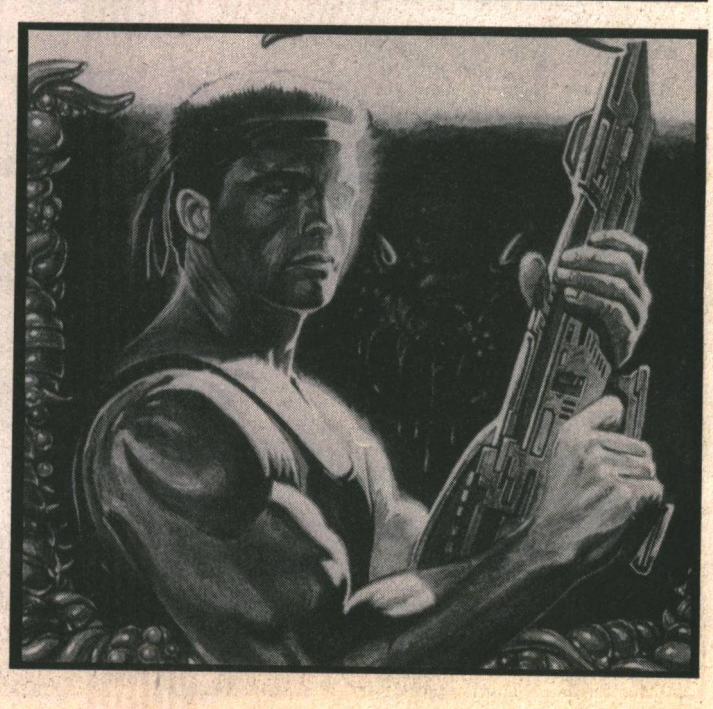
CONTRA

CONTRA is a game available for the **NINTENDO GAMEBOY**. It is a commando combat game where as a lone soldier you must fight against overwhelming odds. 4 missions to select, giving varied terrains, movements and compelling fast play. With just a gun in hand you come face to face with soldiers and heavy artillery.

Gun turrets appear from ground installations, missile silos and army barracks all spew molten metal towards your unprotected body. Hitting certain items presents rewards and a 3 way shooting bazooka can inflict some serious damage and even up the odds.

Snipers hidden in bunkers, up poles and in trees are an added nuisance and appear unexpectedly as does an enormous tank to bar your progress. Sideways, forwards and multi direction scrolling adds a challenging dimension to this war game. Standing tall or lying flat on the ground awaiting an attack supplements the many physical movements that can be made. Jumping across large building rooftops requires fast and accurate fingering. Thoroughly recommended! This is a game with plenty of unexpected events to take you by surprise!

Gameplay	92%
Presentation	94%
Value	95%



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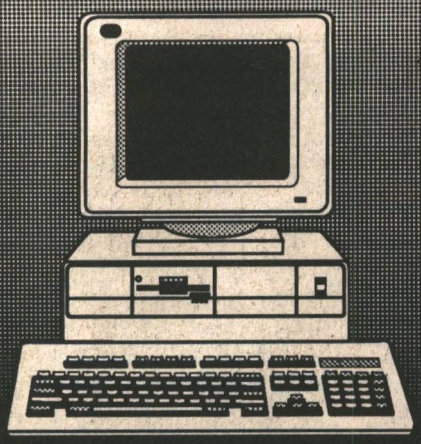

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THE PC-EYE

Mike Ganley examines an effective British anti-virus package

It looks like it's going to be the year of the anti-virus package. Already we've had a major American software house launch it's product. *In none too fine a state it had to be said.* But now it seems to be the turn of some British software houses to get in on the act. One of the first companies to do this is PC Enhancements Ltd, with their product PC-EYE. Which for the record claims to be able to deal with over 280 different infections.

Before we take a look at **PC-EYE** in detail it's worth a quick summary of it's major competitors. A few editions ago I reviewed the new **Norton Anti Virus** and it has to be said I had a few reservations about it, particularly in the area of the documentation. We also took a look at the excellent package from Doctor Solomon which is probably PC-EYE's major competitor. So much for the competition, how about the product?

PC-EYE is in fact a suite of several programs. These make up a new concept of virus protection, being designed to protect your hard disk without any user intervention. It divides up it's virus protection scheme into four distinct methods, which equate to the four main programs in the package.

The first of these is **SCAN**. This is an easy to use virus detection program that checks for the presence of known virus signatures. In addition to this it will detect the presence of companion viruses. *(These are viruses that do not infect files but associate themselves with .EXE files. They produce hidden but modified .COM files).* SCAN will also detect any virus that produces files with illegal date or time stamp. By default it checks the current drive searching all tracks including track zero. This usually includes all files with the extension, .COM, .EXE, .SYS, and .BIN. SCAN incorporates it's own menu system, allowing the user to change drives, paths and so on. It may also be rum from the command line or from the batch file. Which is probably the best method. Adding it to your AUTOEXEC.BAT file will automatically SCAN your computer system every time you boot up. If a virus is found the program automatically produces a detailed log listing the occurrence and nature of the infection.

RAM Infestation?

The second part of the suite, looks for memory resident infections. **MCLEAR** is designed to be run from the hard disk. It checks the integrity of all memory fitted up to the usual DOS limit of 640k and any expanded or extended memory if available. This type of check will detect any Track Zero viruses, all of which are memory resident. It will also check any memory resident files that have been loaded before MCLEAR was run. If any infection is detected all activities are halted and a warning window is displayed. To get past this you will need a password.

Like most of the major virus packages PC-EYE uses a checksum system for file protection. At it's most basic level, this type of virus protection works this way. By running the **FPRINT** section of the program, a fingerprint file is built up. This consists of a checksum for each file selected. This is based on the file length. If an infection occurs then the size of the file will change. By referring to the fingerprint file the **FCHECK** utility can automatically detect a wide range of infections. To increase security to an even greater extent PC-EYE uses a dual checksum routine and can even encrypt the fingerprint file if required. Again the FCHECK program should be run when you boot up your machine. If a virus is detected it also stops execution and produces a log of the incident.

Finally in it's toolbox of protection PC-EYE has the TSR *(Terminate but Stay Resident)* **LOOKOUT**. This stays in the PC's memory and will detect and stop any attempt by a virus to enter the system. It is not virus specific and will detect both known and unknown viruses. It does this by monitoring a wide range of activities. For example any attempt to create, delete or re-name a .COM or .EXE file will be detected. It also looks for more subtle calls to certain system vectors, all of which have been identified as being virus activities. This type of protection might stop legitimate applications from working. So to let these do there work, LOOKOUT's configuration includes a list of exceptions which you have to enter yourself. This is done using a standard text processor, which most users or systems managers will have access to.

Conclusion

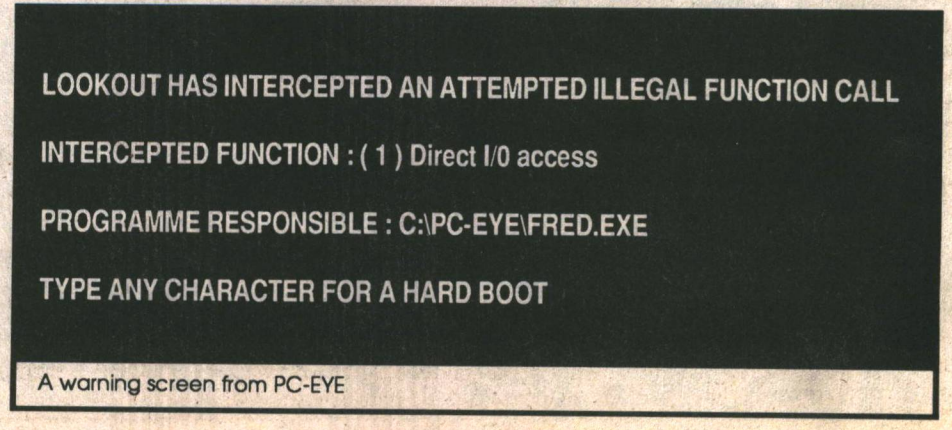
So that's what this package can do. On the surface it looks like a very capable system of virus control. But will it suit your system? Hardware wise it should run on virtually any PC, XT, AT or PS/2. Though your machine should be running a recent version of DOS and have at least 512K of RAM. Any monitor will do *(it uses no graphics.)* Obviously a hard disk is needed. Looking at installation, PC-EYE like most modern PC packages uses an installation program but there is more to this than just typing 'INSTALL'. The manual suggests that before you make your installation that you scan your machine for infections. This is a good idea, but make sure that you use the clean issue disk. Don't be tempted to make a copy of it at this stage. You could unwittingly transfer a virus to it and that would somewhat defeat the object.

Apart from this little deviation, the installation of PC-EYE is quite straight forward. Once all the files are copied across you can run **EYE** which allows you to set up the levels and types of protection that you require. It will not modify your AUTOEXEC.BAT file for you. This had to be done manually. Which is a good choice on the part of the authors. Some applications will do this for you. But they seldom make a good job of it as most peoples batch files are quite different. Simply adding a few lines to the end of the files, won't usually do the job. Once installed PC-EYE works away in the background and is mainly user transparent. You will only be aware of it's presence if your system gets an infection. Or if you install a new piece of software and don't fingerprint it.

I was most impressed with this package. It doesn't possess the flashy graphics of the Norton Antivirus. But does claim to protect you from a wider range of infections and its also cheaper. The manual supplied is excellent. In my own experience British software often falls down here. But not PC-EYE, it's manual is a lesson in clarity and presentation. I suppose the final test of any anti virus package is quite simply does it work?

Thoughtfully PC Enhancements supply a confidence test program which attacks your system. No prizes to PC-EYE for catching that one. I have my own test which effectively checks out the fingerprinting protection. This was also detected by the **LOOKOUT** program. So it seems to work. At a reasonable price and with monthly upgrades *(if you pay for them)* PC-EYE looks like an attractive package and one that will give your own Personal Computer the maximum protection that is currently available.

The PC-EYE package is available from **PC Enhancements Ltd., The Acorn Suite, Greenleaf House, Darkes Lane, Potters Bar, Hertfordshire. EN6 1AE.** Tel: 0707-59016 or Fax: 0707-55523. It costs £87.00 + VAT and a years subscription to the monthly updates costs £45.00 + VAT. Thanks to David Hornsey of PC Enhancements for his help with this review.


LOOKOUT HAS INTERCEPTED AN ATTEMPTED ILLEGAL FUNCTION CALL
INTERCEPTED FUNCTION : (1) Direct I/0 access
PROGRAMME RESPONSIBLE : C:\PC-EYE\FRED.EXE
TYPE ANY CHARACTER FOR A HARD BOOT

A warning screen from PC-EYE

The Virus Solution

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PLEASE NOTE: The programs shown here represent only a tiny fraction of our library, if you are interested in a certain program that is not listed please give us a ring. If it's shareware or Public Domain, we will almost certainly have it in stock. Remember Shareware programs are not free if you continue to use them after the evaluation period, you are required to register with the author.
AUTHORS. Please send us your program for evaluation. If it's good, we will place it in our library and advertise it for you.

UTILITIES — No. Disks

4 DOS, Excellent DOS Spell enhancer 1
Active Life for DOS 2
Advanced Utilities I 1
Advanced Utilities II 1
Alt V2.07 Memory Resident Integrated Multitasking Program 2
Anarkey: Powerful Command line editor similar to DosEdit & CED 1
Assembler Utilities 1
Automenu: Powerful front end menuing system 1
Bakers Dozen 1
Batch Utilities 1 1
Batch Utilities 2 1
Batch Utilities 3 1
Beginners Needs. Useful set of utilities for the novice 1
Disk Commando Shareware clone of Nortons 2
Disk Map Program + SS 1
DOS Utilities 1 1
DOS Utilities 2 1
DOS Utilities 3 1
EGA Utilities 1
Elftree: Full featured disk manager 1
Encryption 2 1
Encryption/Security 1
File Manager 3 1
File Security 1
Floppy Disk Utilities 1
Flu Shot 1
Hard Disk Utilities 1
Intermediate Needs 1
Keyboard Utilities 1
Magic Menu 1
Master Key: Hex, sector disk editor excellent 1
Menu construction Set 2
Back and Forth. Flexible and fast task manager 2
NARC. Friendly front end manager for ARC files 1
Newkey Super keyboard enhance like Prokey, Smartkey etc. 1
Newspace Program for compressing on hard disks. leaving them usable 1
Partiquins Utilities 1
PC Iris Security program 1
PK Lite Compress EXE files leaving them usable 1
PK Zip File compression program for backup 1
PK Zip's friendly. Utilities for PK Zip 1
Point/Shoot/Backup/Rest 1
Power Menu VS.32 Front end menuing system & disk Manager
Recovery Tools 2
Route Directory 3
Scout. Where's file hunter 1
Screen Utilities 1
SEDT for MS-DOS 1
SEDT for MS-Windows 1
Services V3.0 File & Disk Manager 2
SMG Utility Set 1
Special Needs 1
Special Utilities 1
Utilities for the AT 1
Utilities I 1
Utilities II 1
Virus Protection Tools 1
Virus Scan 1
Virus Self Defence Kit 1
VMIX 286 Multitasking DOS spell 1
VMIX 386 1
Wilson Windoware 1
Windows Helpers 1
X-Directory 3.0 File and disk manager 1
XTREE 1

EDUCATIONAL TUTORIAL — No. Disks

ADA Tutor 1
Amy's First Primer Superb 4-8 years old skills tutor (colour monitor) 1
Animated Alphabet Animated graphical word teacher (EGA/VGA) 2
Animated Shapes. Make picture from shapes. (EGA/VGA) (HD) 1
Assembler Tutor 1
Basic Tutorial 1 1
Basic Tutorial 2 1
C Tutor 2
Callacts Physics Physics tutorial 1
Caltest Science Test to GCSE level science 1
DBASE IV Tutor 1
Educational Word Games 1
Electronic Thesaurus 1
Exam Bank 1
French Tutor 1
Happy Games. Childrens tutorial games (CGA + joystick) 1
Kid Paint. Childrens Painting program (EGA) 1
Kindermath. Childrens Maths games 1
Languages. German/Italian multiple flash cards 1
Life Form. Game of Life 1
Logic simulator. Electronic circuit simulation (PC/AT) 1
Lotus 123 Tutor 1
Lotus/Symphony /Tutor 2
Memory Master 1
Modula 2 Tutor 2
Molecular Modelling 2
PC Tutor 1
PC-CA 1
Pre-school Education 1
Primary Education 1
Spanish Tutor 1
Teachers Grades 1
Touch Typing Tutor 1
Turbo C Tutor 1
Turbo Pascal Tutor 2
Tutorial Writer V2
Typing Tutor 1
Typing Tutor 1
VP Tutor 1

GRAPHICS/CAD — No. disks

Alchemy Graphics Tools. Includes Gralcal, Graphics workshop cropGIF requires HP Laserjet or Postscript printer 1
Animal Line-Art: 24 PCC format pictures for use with DTP 1
BG-Art: 128 pictures of cute animal and people cartoons PCX format 1
Cascade Draw 1
Cooper PCX Pictures. 128 Pictures of cute animal and people cartoons PCX format 3
Curve Digitiser. True CAD package for CGA 2
Curve Digitiser - Hercules. True CAD package for Hercules 1
DanCAD. 3D wire frame line drawing/graphing system 2
Draft Choice. Very easy to use CAD package 1
Droege 2
EZ Forms Executive: Extensive forms Generator 1
EZ-Form Lite: Smaller forms generator 1
Finger Paint: Superb GEM type painting package with animation 1
First Publisher Pics 1
Flowcharts: Flow charting graphics tool, excellent 2
Form Master: Easy to use generator 1
Formgen & Filler: Form generator & text filing program 1
GIF Pictures Vol 1 1
GIF Pictures Vol 2 1
Hornback PCX 1
Image 3D 1
Lightning Press: Greetings card generator 1
Mac Clip Art 1
MSP Pictures: 6 large good quality pictures MSP format 1
Office Images: 99 offices scenes in 1 Mg format for DTP 1
Old Fashioned Banners 1-4 4
67 large old fashioned pictures suitable for signs PCX format
Optiks: Graphics viewer & converter 1
Painters Apprentice 5 star screen painting CAD type package 1
PC Draft Ii 1
PC Key Draw Cross between PC Paint Brush & Dr Halo 2
PCX Pictures 2 1
Picture Conversion. Very good picture conversion programs 1
Picture Viewers 1
Pictures 2 1
Prehistoric TIF pics 1
Printmaster Libraries 2
Soule Clip Art 1 1
Soule Clip Art 2 1
Soule Clip Art 3 1
Soule Clip Art 4 1
Symbols: PCX format warning symbols 1
Traxx PCX Sampler, 70 PCX pictures, wide variety of subjects 1
Utilities for use with Ventura:-
Ventura Support 1 1
Ventura Support 2 1
Vuimage. Very good TIF/GIF viewing system 1
The following have every conceivable animal image in PCX format:-
Woodcuts African Animals 1
Woodcuts Arctic & Rodents 1
Woodcuts Birds 1 1
Woodcuts Birds 2 1
Woodcuts Cats 1
Woodcuts Dogs 1
Woodcuts Farm Animals 1
Woodcuts Other Animals 1

ACCOUNTING — No. disks

Case Accounts. Fully integrated system for consultants, proprietorships or partnerships (HD) 3
Checkmate: Full featured general ledger aimed at personal user 1
Cheque-it-out: Excellent personal expense tracker & ledger 1
F/Bucks: Easy to use personal expense tracker and ledger 1
Freeway Cashbook V4.5. Ledger system for retailers, clubs, churches etc. included VAT reports 3
Freeway Ledgermaster: Latest from Freeway, replaces accounts & Accounts+ 4
Freeway Payroll: Latest payroll system for UK firms 3
Home Accounts: Very easy to use expense tracker for personal users 1
Invoice-It V 2 21: Simple invoicing system 1
Mr Bill Full featured invoicing system 2
Noyes Cashbook: Simple expense tracker 1
Noyes Cashbook: + VAT simple expense tracker including VAT reports 1
Noyes Cashbook Analyser: Simple tracking analysers 1
Noyes Mini Accounts: General ledger system for 99 creditors and debitors 1
P&S Home Manager: Full featured ledger system for personal use 1
Page Financial Controller: Sage FC clone, extremely good system, five star rating 3
SOAR: Powerful billing system with Lotus 123. DIF file export/import 3
SBAS Invoice Program: Full featured simple invoice system 1
Starbooks V2.06: Full featured parts, inventory, accounts receivable invoicing system (HD) 1
The Order Pro: Full featured accounts receivable, inventory invoicing system (HD) 1
Taking Care of Business: Full featured general ledger, fully menu driven, excellent system 3
T.C.B. Accounts Payable: Accounts payable module for taking care of business 1
T.C.B. Accounts Receivable: Accounts receivable module for taking care of business 1
Regit Point of Sale: Point of sale inventory system with customer database 2

DATABASES — No. disks

Flexbase: Highly rated Dbase, menu driven easy to use 2
Information Please V2.0 Text, memo, catalogue, invoice etc. database, easy to learn pop-down menus.
Label Maker: Graphics based label generator 1
Mastmail: Special features mailing label program, import/export/merge and phone dialler (HD) 1
Memory Bank: Full featured home management database
Names and Dates: Cross between full mailing list manager and name and address book, phone dialler enclosed 1
PC File V5 3
Photomaster
Profile: Memo type database similar to PC File (HD) 2
SR Info: Programmable database, formerly VP-Info (HD) 2
The address Book Solution: TSE list manager system, too many features to mention 1
The Daily Logbook: Computerised daily diary/log many features 1
Ultra Base: Flat file database/system requires colour monitor (HD) 2
Vehicle Record System: Vehicle record database management system 1
Video & Postcard Master: Video and postacard databases 1
Wampum Superb multi-function database, supports graphics (requires EGA, VGA, Hercules) (HD) 1
dBase III Support: Add on utilities for dBase III 1
dBase III support II: Even more utilities for dBase III
dProg: Excellent source code generator for dBase III & Clipper (HD)
Electronic Address Book: Fast search database (UK) 1
Electronic Card File: Simple card database (UK) 1
Post Codes: Alphabetic order, ASC, DIF, WKS format 1
STD Codes: Numeric order with exchange 1
AT Last: Menu driven, high capacity (UK) 1
Zephyr: Similar to FoxPro (HD) 2

GAMES — No. disks

Popcorn: Arkanoid Style game 1
Triclops AT version - needs EGA 1
Supernova: Deep space adventure 1
Castle Master: New version 1
Mystery of the Java Star: Enthralling game 1
Global Battle: Similar to 'Risk' UK version 1
Star Trek II The Next Generation 1
Kung Fu Louie: Martial Arts game (EGA, VGA) 2
Battle for Atlantis: Conquer 8 islands (EGA, VGA)
Commander Keen: EGA, VGA Fight off the Vortigon invaders 1
Manjongg VGA 1
Mouse Games: Boa, Mianbreak
Moraff's Blast 1
Haunted Mission. Find and Rescue Pumpkin man 1
Wizards Lair: CGA Mediaeval adventure (HD) 2
Alive Sharks! Avoid shark while searching for treasure 1
VGA Sharks, VGA version of above 1
VGA Concentration: Flags and national costume matching game 1
More Kroz: Shrine, Lost Kroz 1
intergalactic Battle: Starwars on your computer (CGA) 1
Solitaire Games: Accordion, Canfield, Eliminate, Golf, Klondike, Nestor, Pyramid, Staker, Vegas 1
Map Based Adventures: Castle Questor, Sleuth, Zoarre 1
Golf Dayton, Ohio 18 hole South Course 1
Arcade Games II Hover Poker, Pharaohs Tomb 1
Arcade Games 12: Chopper, D Blocks, Frazzle 1
Arcade Games 13: Race 3000, Train Ball, Insane, Wordmix 1
Arcade Games 10: VGA shoot-out Man Jonge 1
Arcade Games 9: Batalia: Berzerk, Ouboloids, Diskcrash, EM, Shuttle, Tank, Trax, Willy 1
Arcade Games 6: Black Box, Columns, Elevator, Nemon, Pitfall, Rockets Round 42 1
Arcade Games 7: Blockade, Blortll Caverns, Daleks, Mines, Ninja, Quantoids 1
Arcade Games 8: Chernobyl, Depthcharge, Pearl, Lawn, Rocket 1

WINDOWS APPLICATIONS

WIN001Screen Peace & Screen Savers

Screen Peace: Is a complete screen saving system (W23)
SPSavers: 10 additional screen peace savers (W23)
Savers 2: 2 more screen savers, Dragon Kite and a rotating 3D sphere: (W23)
Blanker: Just blanks the screen. (W23)
Fireworks: An attractive simulation of a fireworks display (W23)
Monitor Savers: Multiple option screen saver for Windows 3
BlackOut: Displays a small ghost on the screen. Has source code included (W2)
Magic: Fully functional screen saver (W3)
Lights: To be completely different this one blanks the screen (W3)
Retina Relief: A screen saver with various moving patterns (W3)
Winker: Combined eyeballs icon and screen saver

WIN002 Jokes and Novelties

Bug: A bug in Windows? Turns the mouse pointer into a hopping flea (W23)
Gopher: A gopher pops up on the windows screen (W2)
Blast: A laser hole in our screen with the appropriate sound (W23)
MSH-Fun: Three more bug type programs. Bullet holes, faces and cracks (W2)
Slug: Watch the slugs slowly eat your screen (W23)
NewEyes: Cursor tracking eyeballs (W3)
Eyes: The original eyes program. Includes source code. (W23)
Fun: Windows 3 version of MSHFun
Trash: A trash can for Windows (W3)
Cookie: Fortune cookie program with ability to add your own fortunes (W23)
Horses: Galloping horse icon (W3)
Typewrite: Typewrite sound affects from the keyboard (W3)
Ghost: Animated Halloween Card (W23)
Hanoi: Animated Tower of Hanoi puzzle, runs iconised (W23)
Fish3: Animated tropical fish tank (W3)
Flasher: Stroboscopic program (W23)
Magnifiers: Magnifying glass to examine your pixels (W23)
MacNot: A macintosh look-alike (almost) background bitmap (W3)
Fortune: Another fortune cookie program (W23)
Words: Random poetry generator ? with source code (W23)

WIN003 Arcade and Board Games

Atmods: Asteroids type game (W3)
Brick: Minimal but attractive version of breakout (W3)
Klotz: Sophisticated version of the famous Tetris (W23)
Lunar Lander: Nicely done windows version of the old favourite (W3)
Mines: Find your way through the minefield (W3)
Space: Another asteroid type game (W23)
StarBase: Simple version of the old favourite (W23)
SpaceWalls: Shoot em up space game (W3)
WormWar: Centipede type game (W3)
Puzzle: Sliding tile puzzle (W3)
Miser: Master Mind type game (W3)
Lucas: Lucas's puzzle, try to reverse the position of the pieces (W3)
Checkers: nice draughts game for windows (W3)
BackGammon: Excellent implementation that has all the features (W23)
Taipei: Solitaire game using Mah Jong tiles. Superb graphics (W3)
Pente: Get 5 pieces in a row. (W23)
Yacht: Yah-Tzee type dire game (W3)

WIN004 Windows Icon Utilities + 376 Icons

Icon Tamer: A complete icon management utility (W3)
VI: Viewing of multiple icon files (W3)
GetIcon: Will extract and edit an icon file from a Windows application (W3)
PutIcon: Will replace the icon in the application (W3)
ViewIcon: Yet another icon viewing program.
ITools: Display all icon in a directory and modify colours (W3)
Icon Edit: A fully featured DOS icon editor (W3)
Just Icons: 376 icons for you to play with (W3)

WIN005 Paint Shop and Graphics Utilities

Paint Shop: Use as a picture viewer, converter of graphics utility (W3)
GIF2EMP: program to convert GIF files to windows BitMap BMP format. (DOS)
GIF2PCX: Program to convert GIF file to PC Paintbrush PCX format (DOS)
TIF2WIN: Two programs TIF2BIT and BIT2WP convert TIFF to PCX,GIF,IMG, etc (DOS)
Tiffany: This program will capture current screen to TIF format. (W23)
WINGIF: Specifically designed to view and manipulate GIF files (W3)
SnagIt: screen capture selected area to clipboard or printer (W3)
GCP: View, convert and manipulate PCX, MSP, GIF and MACpaint format (W23)
MAC2MSP: Convert mono MacPaint file to MSP format (W23)
MacToWin: Program to convert MacPaint to MSP format (DOS)
MetaPlay: Convert MetaFile to BMP format (W23)
WinClip: Convert BitMap from clipboard to MS Word 5 format (W23)

WIN006 Windows Icon & Icon draw

IconDraw: Full featured Graphical paintbox for creating new icons (W23)
W3 icons: Contains 73 various icons to add to you windows program (W3)
376 icons: 376 icons for you to play with (W23)

WIN007 Chess, Dice and Xword

Chess: High quality chess program for windows 3.
ChessNet: Play chess with friend over the phone (W23)
Dice: A dice rolling program for Role-Playing Games (W3)
Xword: Enter, create and work crossword puzzles (W23)

WIN008 Card Games

WinPoker High quality video poker game (W3)
WinJack: Another attractive card game (W23)

WIN009 Text Editor and programming Examples

WinEdit: A real text editor for windows (W3)
Example: Various demonstration programs with source code (DOS)

WIN010 Pascal and Development Utilities

Pascal for Windows: Pascal editor, compiler and interpreter (W3)
DDEWatch: Application for monitoring DDE message (W3)
EXEC: Assembler Source code to spawn new processes under windows (W3)
HyperLink: Provides a hotkey link from your windows text editor (W3)
IconDLL: Create DLLs containing Icons, requires SDK (W3)
MakeFont: Create window fonts from your video card ROM, requires SDK (W3)
NotePad4: Set NotePad tabs to 4 across for program editing (W3)
OX-OX.SYS: Will redirect I/O from the AUX device to your MDA display (W3)
RCView: View and extract resources from windows program files (W23)
RCView: View and extract resources from

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We have got almost every Windows program available, and archived the vast majority, to enable us to supply the best possible value for your money, with the Disks crammed full of extra programs, AT NO EXTRA CHARGE. All of our programs are FULLY MENU DRIVEN and self extracting, so all you have to do is put the Disk in drive A and type "GO". Check what other Companies are giving you, and then come to us.

windows program files (W23)
SexyHdr: Replaces the SDK header, displays more information (DOS)
Tile: Displays clipboard bitmap as tiled wallpaper (W3)
Timelt: A small program to time code under development (W23)
Tree: Walk and display the linked list of window modes (W3)
Version: Add registration information to a program (W3)
WinBegin: Generates a basic skeleton for your windows program (W3)
WinRip: Intercepts Fatal Exit messages (W3)

WIN011 Futuri Black and Type 1 Fonts

Futuri Black: High quality Type 1 postscript font (W3)
Postscript Type1: Six Adobe type 1 fonts for Adobe Manager (W23)

WIN012 BitMap Screen Fonts 180

WinFonts 180: Eleven 180 resolution BitMap (Screen) Fonts (W23)

WIN013 Windows 2 Enhancers, Games and Novelties

Disk Jumper: Directory Tree file display, run multiple MS-DOS EXECs (W3)
Disk Map: Disk usage information for one or more drives (W3)
Downer: Iconise and restore all applications at once (W23)
ExecView: Save MS DOS EXEC view defaults (W23)
FileSaver: Deferred printing utility (W3)
FullView: Enlarge DOS apps to full 80x25 size (W3)
HPCall: Scientific Calculator (W3)
Viewer: File browser, handles, large files (W23)
Watson: Display memory, Windows and disk status (W23)
WinBat: Invoke several windows or DOS applications in a single command (W3)
Winfo: EMS and windows information display (DOS)
WinWhere: File finder (W23)
Balloon: Balloons drifting upwards. Attractive (W3)
Bounce: Bouncing spinning Earth. (W23)
Decide: Windows colour scheme enhancer (W23)
Life: Very neat little version of life (W2)
Mickey: Famous rodent style clock (W3)
Solitaire: Solitaire for windows 2 (W3)
Taipai: Solitaire game using mah Jong tiles, nice graphics (W3)
TicTac: 3D noughts and crosses (W3)

WIN014 Networking Utilities +

WindMail: An E-Mail and bulletin board (W23)
Disc Police: A program to manage shared disc space. (W3)
VU: Reports utilisation statistics for each hard disk (DOS)
Woggin: Is a multi-server login, logout utility for Novell Netware (W3)
Window Send: Send broadcast messages to users across a netware LAN (W3)

WIN015 Windows Tools 1

Codes: Displays of tables of ANSI, ASCII and EBCDIC characters (W23)
Curse: Choice of 13 different cursors. Faces, cartons, wizards etc (W23)
Desk Save: Save Windows program positions and sizes as default (W23)
Drives: Displays information about drives, free space, etc (W23)
Harrison Utilities:
RUN allows programs to be run from the command line
CLOSER closes down other programs
CLEAN clears the clipboard and compacts memory.
EXITWIN shuts down windows without the program manager (W23)
K-Free: Displays amount of free memory and disk spare (W23)
Mark30: Fun non 3 programs under 3 without giving a warning message (W23)
Screen Peace: Screen saver that allows any specified delay (W23)
Second Chance: Associate 2 to 16 candidate program to each suffix (W23)
Tasks: Displays information tasks, mode, EMS, memory available etc (W23)
Tile: Displays bitmap in clipboard in tiled format (W23)

WIM016 MS Windows Tools 2

Active Life: Appointment book, calendar, alarms and telephone dialler (W23)
Colorfix: Produce better colours on EGA monitors (W23)
DiskJump: Directory listing with file listing and compare (W23)
Fireworks: Automatic screen blanking for CGA monitors (W23)
FontDemo: Displays the fonts available via Executive System (W23)
GCP: Display, manipulate and convert pictures, windows, Mac, GIF, PCX (W23)
Hunter: File and text finding utility (W23)
SysGraph: Show usage statistics in real time (W23)
Tiffany: TIFF screen capture (W23)
Tiler2: Allows you to tile your screen windows (W23)
WAM: Windows Application Manager is a menu-like system (W23)

WIN017 MS Windows Tools 3

Closer: Single-focused program to close other windows (W23)
DispInfo: Runs test on MS Windows (W23)
Finder: A Windows "Where is". Find files on any drive or sub-directory (W23)
Finfo: Device and font display (W23)
Spy: Shows sizes of active windows (W2, W3)
SpyGlass: Magnifying glass for the screen (W23)
Watson: System information utility. (W23)
WinArcL.: Archive contents lister for ARC, .ZOO, and .PAK files. (W23)
WSZ: Shows size of windows in pixels, millimetres, and inches. (W23)

WIN018 MS Windows Tools 4

Aporia: Icon-based file manager with a number of tools. (W23)
GetCards: Prints envelopes, cards, and labels from cardfile program. (W23)
Medic: System reporting about disks, display, RAM, ROM, CPU, WIN.INT. (23)
Lock: Locks the keyboard for security. Password unlock. (W23)

WIN019 Wilson Window Ware

Three separate systems which work together to make your life easier.

Applets: Handles copying, moving, deleting and renaming files. (W23)
Browser: Browse, print, clipboarding and hex dump display. (W23)
Command Post: A full-featured menu system. (W23)

WIN020 MS Windows Displays

Bounce: Bouncing spinning ball. Prograde, retrograde, or variable. (W23)
Burst: Waits 1 minute and hits screen with rocks. (W23)
Burst 2: Like Burst but random timing. (W23)
CircleSquared: Create wallpaper. With mark, move and copy. (W23)
Crumble: Watch your screen disappear. (W23)
Face: Draws faces randomly on the screen. (W23)
Flasher: Scroboscope for windows. Make your own disco dance floor. (W23)
Ghost: Halloween animated graphics. Ghosts, witches and thingies. (W23)
Gopher: Gophers on the screen. They don't go away. (W23)
Guru: See the Guru meditate. Good joke for those with friends to loose. (W23)
Mandala: An "isotrophic design for R & R". Beautiful.
Mole: Randomly burrows moles up through the windows desktop. (W23)
Slug: Hungry little bug that eats the screen. (W23)

Super Fuse: Definable kaleidoscope. Zoom, lag factors, XOR fuses. (W23)

WIN021 Games for MS Windows

Backgammon: Two player backgammon for keyboard or mouse. (W23)
Fifteen: A 15 puzzle game. Quick interface using mouse. Cheat mode. (W23)
Gapper: Get your Gapper to change blue lines to red. (W23)
Hanoi: Towers of Hanoi demonstration with 3 to 8 disks. (W23)
Life: 2 versions of the game of Life are included on this disk. (W23)
Pente: The classic game of getting 5 in a row against the computer. (W23)
Solitaire: Standard 7-card across aces up solitaire. Excellent. (W23)
Taipei: Mah Jongg for Windows. (W23)
Tetris: Dropping shapes game. The current rage. (W23)
XWord: Create, save and work crossword puzzles on line. (W23)

WIN022 MS WINDOWS DESKTOP TOOLS 1

Desk Top: A full menu system. (W23)
DeskNav: File manager to copy, move, delete, and browse files. (W23)
FreeMem: Displays conventional and expanded memory for MS Windows/286. (W23)
Phones: Name and address book that dials the phone through the modem. (W23)
Time: A digital pop up display that can be positioned anywhere. (W23)
Unicom: A Windows based communications program with dialling directory. (W23)

WIN023 MS Windows Desktop Tools 2

Alarm: Mac-Like Alarm Clock. Beeps until turned off. (W23)
Almanac: Slick calendar/databook program. (W3)
Midas: Four function calculator. (W3)
Satellite Finder: Some TV satellite information.

WIN024 Lessimore Mandelbrot and Friends

Lessimore: A point and shoot gallery of applications and utilities. (W3)
Mandelbrot: Mandelbrot set fractal generator. (W3)
Plus several other utilities.

WIN025 Playroom Screen Drivers

Three sets of video drivers to make windows look like Next, OS-Motiff or Macintosh buttons. (W3)

WIN026 Metz Utilities 1

Desktop Navigator: Xtree for Windows. Includes a Window arranger. (W23)
Lock: A password locking application and Screen Blanker. (W23)
Runner: Sort of fastopen for windows. (W23)
Task Manager: Complete replacement for the Windows Task Manager. (W3)

WIN027 Metz Utilities 2

Dialer: A nice handy pop-up phone dialer for your modem. (W23)
Desktop Manager: Comprehensive menu and file management system. (W23)
FreeMem: Just displays free memory. (W23)
Phones: An address and phone book, includes an autodialer. (W23)
Time: This a digital clock they always manages to remain visible. (W23)
This disk also includes OS2 versions of Time and FreeMem.

WIN028 GScript and W4W Macros

GScript: A suite of MACROS enter, edit and format screenplays. (W3)
Dinger: W4W macro to put dinbats, symbols and characters in text. (W3)
Enveloper: A W4W macro to print envelopes on LaserJet compatibles. (W3)
Get: Macro searches your Person Category. (W3)
Glools: Several short macros, from toggles to dialogue box macros. (W3)
Insert: Macro for insertion of special characters. (W3)
DDEX: Example macro to demonstrate access to Program Manager from W4W. (W3)
ParaMake: Convert documents with LF/CR on each line. (W3)

WIN029 General Utilities 2

Mark30: Run under 3.0 without giving a warning message. (W3)
Whiskers: Makes right hand bottom button act as a Return key. (W3)
TimeLine: Tiny digital clock that takes about 6k memory. (W3)
WinClock: Digital alarm clock that always stays visible. (W3)
WinPrint: Formats text files with fonts, margins, headers, etc. (W3)
ZipPaper: Extract wallpaper randomly from Zip file. (W3)
WallBlaster: Similar to Zip Paper - extracts zipped Wallpaper. (W3)
Raise: Auto-Raise allows the user to switch among Windows on the screen. (W3)
WinPost: A program for manipulating on-the-screen Post-It (TM). (W3)
Change Cursor: Change the arrow/hour glass cursors shape. (W3)
Doorway: A simple and fast route to the DOS prompt. (W3)

WIN030 WinBatch & General Utils 1

WinBatch: A complete Windows 3 batch language. (W3)
ASCII: Ascii table viewer. (W23)
BigCursor: Gives your mouse a big pointer. (W3)
CapsBeep: Caps lock beeper. (W23)
Click: Fully customisable keyboard-click program - (W3)
Color: Display colours in current palette. (W3)
Layout: Arrange, save and restore one or more screen-layouts. (W3)
Mouse Initialiser: Facilitates use of mouse with DOS applications. (W3)
NewPaper: Randomly selects Wallpaper Bitmap. (W3)
RecRun: Assign Icon to Recorded Macros in Program Manager. (W3)
Second Chance: Associate multiple applications to a file extension. (W23)
Utils 104: Run multiple applications with command-line.
Closer: Closes Windows, CLEAN - Free up memory. (W3)
Character Table: DEM and ANSI character table viewer. (W3)
WinExit: Quick exit from Windows. (W3)
WinPark: Windows Head Parker. (W23)

WIN031 Windows Menu Systems and Applications

BackMenu: Define a pop-up menu on the Windows background. (W3)
Builder: Create and define buttons at the bottom of your screen. (W3)
CD and Run: Run any program from anywhere on the machine. (W3)
WinChain: Run programs from a DOS compatibility box. (W3)
Launch: Configureable menu from which users can start their programs. (W3)
LUtils: These are three programs for use with Launch. (W3)
RunProg: Run up to 10 programs from your WIN.INI. (W3)
CMDLine: Run programs that accept command line arguments. (W3)
Group Build: Builds program manager groups from a command file. (W3)
HotKey: Runs any program from a Hot Key combination. (W3)
Windows Program Menu: This is a small menu system, very easy to use. (W23)
Runner: Run any program, batch file or PIF file from a small icon. (W3)
Starts: Quick launch notepad, DOS Shell, DOS executive and a calculator. (W3)
Start: Another very easy to use mini menu system. (W23)
WAM: Menu system thats small but very powerful and extremely flexible. (W23)

WIN032 Windows Navigator

Navigator provides a MAGELLAN, PCTOOLS/PCSHELL OR XTREE "like" interface for MS Windows 3. Completely user configurable. (W3)

WIN033 WinQVT for Networks

An implementation of WINQVT for PC's attached to a TCP/IP Network. Will support up to 15 simultaneous terminal sessions on different host systems.
Has emulation of the DEC "VT" series of terminals, VT220, VT102 and VT52.
Included are 60 or so driver programs. (W3)

WIN034 Windows Personal Finance

WinCheck: Chequebook program from Wilson Window Ware. (W3)
Checkbook: Another chequebook program. (W3)
Credit Window: This is a credit account management program. (W23)

WIN035 Fractal BitMaps

A selection of 9 dazzling fractal bitmap images in standard 16 colour VGA Windows BitMap font format to use as background wallpaper for windows. (W3)

WIN036 Sect for MS-DOS, WINDOWS & OS/2. (2 Disks available separately)

Three flavours of the same massive text editor are supplied on these two disks. They all run very similarly and share the same documentation.

WIN037 Windows Wallpaper 1

A disk of .BMP pictures. Editable via MS Paint Brush. (W23)

12 pictures includes Space Shuttle, Galaxy, Half Dome, Dragons, Saturn, Dick Tracey, F16 Heads-up Display, US Flag, etc. (W23)
Newpaper: Changes the wallpaper at random at each bootup. (W23)

WIN038 Windows Helper

Almanac: Slick calendar/databook program. (W23)
Zip Manager: Front end system for the PKZIP system. Requires PKZip. (W23)

WIN039 Active Life for Windows DOS (2 Disk available separately)

The DOS version of appointment book has the same look as the Windows version so it feels like a first class Window application.
Contains: Alarm clock, Calendars, Notebook style editor, Auto dialer, Task scheduler and appointment book. Prints schedules.

WIN040 WinFract and Friends

WinFract: Windows version of the famous DOS FractInt fractal generator. (W3)
NorNer: A biomorphic-capable fractal generator. (W3)
Chaos Generator: Chaotic pattern generator. (W23)
Freds Fractals: Displays 4 fractal patterns. (W3)
Pool: Chaotic from bouncing pool balls. (W3)
Termite: A termites nest simulation. (W3)
Gloys: Mandelbrot, Dragons and Julia fractals in nice colours. (W3)

WIN041 WinFract and FractInt

WinFract: Latest windows version of the DOS Fractal fractal generator. This program has the lot, can display almost any conceivable fractal image in up to 256 colours. W3).
FractInt Documentation: Contains a guide to using FractInt and the complete DOS FractInt user guide. (W3)

WIN042 WinFract Source Code

The complete source code for WinFract, Almost 1mb all together. You will need the MS development kit and MicrSoft C 5.1 or higher if you wish to compile it.

WIN043 Fractal Paint and BMPs

Fractal Paint: Create images of clouds, trees, mountains, etc. (W3)
BMPs: Colour fractal images in Windows BitMap (BMP). (W3)
Mandelbrot: Mandelbrot set fractal generator. (W3)
Trichaos: Triangular chaotic pattern. Includes source code. (W23)
Gloys: Mandelbrot, Dragons and Julia fractals in nice colours. (W3)

WIN044 Windows Special Interest 1

Chemistry Program: Complete periodic table of the elements. (W3)
Elements: A simple periodic table program. (W3)
HPCalc: HP like calculator with scientific functions. (W3)
Metric Convertor : Handles fourteen conversions to metric (SI) systems. (W3)
MathGraf: Mathematical graph plotting application for Windows. (W3)
Organise: This is a neat personal information manager. (W3)
Biorhythm: A version specifically for Windows 2 or 3.
Parents: geneology program for windows. (W3)
Recipe Maker: Designed to help make weekly grocery shopping. (W3)

WIN045 Windows Special Interest 2

BoxPlot: Design your own Hi-Fi (W3)
CaseLiner: Prints case liners for audio cassettes. (W3)
Guitar Scales and Modes: Displays any scale or mode on a guitar neck. (W3)
MVP-Keys: On screen keyboard to play with your Midi toys. (W23)
Sage: Is a windows program that displays pearls of wisdom. (W3).
Pundit: Another program that pops up a window to display a quotation. (W3)

WIN046 Winkermit & Friends

Winker: 2 Windows Heath/Zenith H/Z-19 terminal emulators. (W23)
PortFind: Use Comm3/4 ports in Windows. (W23)
ComProg: Tiny (smaller than terminal) Comms program. (W23)

WIN047 Windows Unicom

Unicom: An excellent communications product. Facilities include File Transfer (running in background while iconised), programmable language script file, pre-programmed execution of script files at specific date and time, Directory dialling, on-line help, journalising will record keyboard and mouse input, Host mode, transfer clipboard to another UNICOM users clipboard etc. (W23)

WIN048 WinQVT

WinQVT is a high quality DEC VT220/102/52 terminal emulator and communications program which has been created to run under Windows as a true "Windows" application. Transfer protocols: Compuserve B, Kermit, Xmodem, Ymodem and Zmodem. WinQVT provides exceptionally complete VT emulation. (W3)

WIN049 CardFile and System Metering Utilities

CardConv: Convert *.CRD files to ASCII. (Dos)
CardPrint: Print *.CRD files without boxes or pictures. (DOS).
GetCard: Print envelopes, labels etc from *.CRD files (DOS)
FCFA: Convert or print *.CRD files in ASCII or tabular format. (DOS)
ClipCard: 2 card files of clip art, animals and equipment. (W23)
KFree: Display free memory including EMS and largest contiguous block. (W3)
FreeMem: Free memory display from Relational Systems. (W3)
SysGraph: Graphically iconised display unused processor time. (W2)
WordCount: Counts the words in the clipboard. (W23)
WinInfo: Displays EMS, HIMEM status and information. (W2)
FreeDisk: Iconised display of free disk space. (W2)

WIN050 Command Post & Windows 3 Icons

Wilson Window Ware's full featured menu system. You can add your own menus and personalise the executive control window. Gives screen blanking, times and date display, etc. A file management facility helps navigate subdirectories. More. Includes Browser, a list-like utility for windows. (W3)
W3 Icons: Contains 93 various icons to add to your windows program. (W3)

WIN051 Windows Icon Utilities

Icon Tamer: Complete icon management utility. (W3)
VI: View multiple icon files.
GetIcon: Icon extraction and editing tool. (W3)
PutIcon: Replace the icon in the application. (W3)
ViewIcon: Icon Viewing program. (W3)
ITools: Modification of icon colour, including transparent backgrounds. (W3)
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Included are 60 or so driver programs. (W3)

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brother M-1818 Printer

Mark Caro reviews the 18-pin from Brother...

I think that Epson have become very well known in the printer market, but Brother also have a good following. In this issue of the magazine we have a well made printer from Brother for review, read on to find out more about this 18-pin impact dot matrix system.

When you first unpack the printer you are greeted with a nice looking, sturdy, and well built piece of equipment. The first thing you notice is the flashy control panel with it's LCD display and array of soft touch switches. This obviously means that there are no fiddly DIP switches to mess around with, thank god!

The printer has many standard features available. The paper handling functions include a rear "push type" tractor, automatic paper loading, paper parking standing, and automatic tear off advance. Two resident fonts are available, these being Prestige and Quadro as well as an easy loading ribbon cassette. A "quiet" mode operation is available too, with 6,000 hours of operation before breakdown on average, and a long life seamless fabric ribbon.

On the speed side of things a top speed of 360 cps *(characters per second)* is offered. Obviously this is in draft mode. 75 cps is available in NLQ *(near letter quality)* mode, and 50 cps is available in LQ *(letter quality)* though there is not much difference.

Extra options available to enhance the capabilities are available. Some of these include a colour kit *(the CK-100)* which includes the shift mechanism and the colour ribbon *(9095)*; an automatic sheet feeder capable of handling up to 150 sheets of A4 sized paper *(the SF-240)*; a top pull-up tractor to ensure thick multi-part forms are fed smoothly *(the TF-240)*; a 32KB RAM card for a download buffer *(the RC-100)*, and a font IC card *(the LQ-400)* which includes Anelia PS, Gothic, and Brougham.

On the outside of the printer you have the control panel *(as mentioned above)*. This features an LCD screen 8 characters wide by 2 lines deep. On the left of this is a power and check light, while on the right there are six switches. Each switch has at least two functions. These functions are split into two sets, one to do with the setup and the other to do with the usual facilities such as line feeding and form feeding.

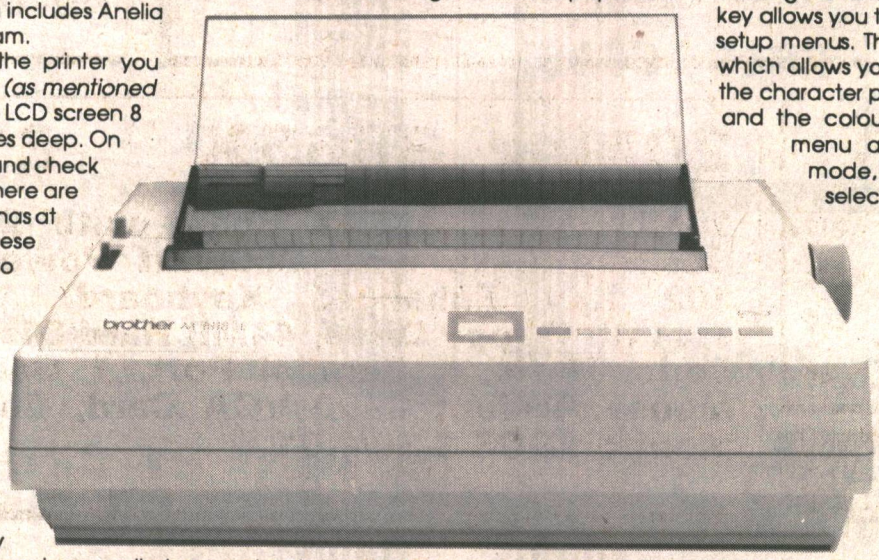
On the top left hand side of the printer there is a paper type select switch, this is not electronic, just mechanical as they usually are. Next to this is the head gap adjuster which is also mechanical. On the opposite side there is a chunky manual paper feed knob, though I didn't have much need for this when I used the printer as virtually everything was done automatically for me.

The power switch is located on the back right hand top side of the machine, not as hard as reaching to the back side of the machine or the lower left or right side for that matter. On the lower left hand side there are the cable connectors for parallel and serial interfaces. There is a plastic cover that slides over the one which is not being used at the time, quite a well thought of feature.

On top side you have a pop up single sheet guide. This has an adjustable paper stopper so different width paper can be loaded and guided in safely. This can be completely removed or just folded down flat, if you so desire, when operating in fan fold mode. Behind this is the built in tractor feed with adjustable width and a paper guide in the middle. The cover, that most printers have, which hide the print head is known in this case as the acoustic cover. When in place you can hardly see any print head movement at all.

Simple

Inserting paper is a simple task. All you have to do is set the head gap switch to the appropriate thickness of the paper *(a chart is given in the manual)*, place the paper in the feeder, and press the TOF *(Top Of Form)* switch. The paper is then sucked in automatically and with any luck it should be positioned ready for printing. This is for single sheets by the way. To eject the paper all you do is hit the eject key and out it pops, simple and effective. Using continuous paper isn't so hard either. All you have to do is line up the paper with the tractor feed and again press the TOF switch, and away you go.



A useful feature available to do with paper is the paper parking function. If you are using continuous form paper in the printer, you can load single sheets without removing the continuous forms from the printer. What the printer does is reverse the loaded forms and park them at the tractor feeder, out of the way of the single sheets.

Returning to the control panel you can set up many variables. On many older printers, and new ones still, you would have had to get to some awkwardly placed DIP switches. This is a thing of the past with the new Brother printers. All of the them seem to have this control panel, which is very often similar on different models. We have a brother HL-8e in the office and the control panel wasn't much different. If you can use one you can use them all.

The power indicator is obvious. Next to this is the check lamp. If this lights up or flashes then an error has been detected. Some of these could be the cover open, driver circuit malfunction, no paper etc. On the LCD display you have the print, load, pitch, and font displayed most of the time. Print tells you what print mode the printer is in; draft, NLQ, or LQ. Load tells you what type of sheets you are using. Pitch gives you information via 10, 12, 17, 20 and PS which correspond to Pica, Elite, Pica Condensed, Elite Condensed, and Proportional Spacing respectively. Font displays Pres for Prestige, Quad for Quadro and D.L. for Download.

The six switches on the front panel are SEL *(on line)* and MENU, LF *(Line Feed)* and ITEM, TOF and UP, EJECT and DOWN, LOAD and SET, and FUNCTION and QUIT. The function mode allows you do perform a wide variety of tasks. and access many facilities.

Menus

Pressing the function key and then the menu key allows you to go through a selection of setup menus. These include the font menu which allows you to set the quality of print, the character pitch, the line pitch, the font, and the colour if available. The control menu allows you to select quiet mode, lets you reset the buffer, and selects uni or bidirectional. The emulation menu gives you a wide variety also. Here you can select Epson FX or IBM Proprinter series printers for emulation. This makes the printer compatible with just about every software package available which is worthwhile using. Five character sets are available and a large selection of eighteen languages can be set. You can also choose to print a zero with a slash through it, select Near Letter Quality download on or off, and the buffer size can be set.

The I/F menu allows you to set up the interface ports. Centronics parallel or RS-232C serial interfaces are available. Only one option is available for the parallel port, this being the SLCT IN signal on or off. The

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brother M-1818 Printer

serial port can have the baud rate set, 110 to 9600 bps is available, the data length either 7 or 8-bits, the parity either none, even or odd, and the communications protocol can be set to use either DTR *(Data Terminal Ready)* or XON/XOFF flow control.

The next menu is the format menu. From this section you can select the page length in inches, enable or disable the tear off function, adjust the top of form position or the first typing line and, set the left margin and the right margin. You can also enable or disable the perforation skipper, auto linefeed, auto carriage return, and justify type *(left, center, right or full)*. The Tear off function mentioned above allows you to tear off continuous forms more easily. It lines up the paper cutter with the tear off position on the paper, this is a very well thought out idea.

The last menu is the print style menu. This is for setting the style of print you want on the paper. Italic, emphasize, double strike, double wide, double high, super script and sub script are all available. You can also reset the printer to factory settings if you make a mess of your own. This again is a menu option with many variables which can be set. All of the above is explained well in the manual with easy to follow flow charts and descriptions which are provided.

The only thing I did not like about the printer was the movement it made while printing. I had the machine on a desk next to my PC, and whenever it was printing, the whole desk would move. This is only a minor quibble though, and doesn't mean you shouldn't buy one. The print quality is as good as any I have seen from a 24-pin dot matrix printer, but as fast as most 9-pins available, complete with a good graphics mode of 216 x 240 DPI *(dots per inch)*. At the time of review the suggested selling price was £449, although you may be able to find it cheaper elsewhere. The printer does offer a great deal if a dot matrix is what you are after. It would be ideal for business applications such as data processing and multi-part forms or invoices. **For more information please contact Brother on 061-330-6531 or the International Office on 071-387-9339.**

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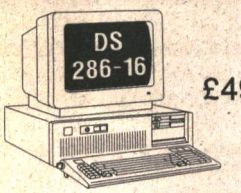

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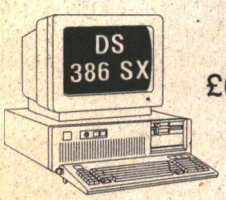

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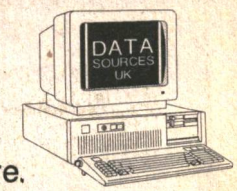

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Legitimate Cheating!

Some cost cutting ideas examined by Mike Coleman...

A provisional glance through backnumber computer journals soon indicated the huge range of products which have failed commercially. Even today supply greatly exceeds demand, and the mightiest companies are not immune. Thus it is the consumer who calls the tune.

One has only to look at the plight of computer users in eastern Europe to appreciate how fortunate we are here in the United Kingdom. Indeed I would go further and state that if due care is taken one can achieve a better deal here than anywhere else in the world. In this article I shall set out some basic guide-lines for the bargain hunter. The object is to help you to make your money go further. Here are several ploys to help you get a bargain:

Gathering Dust: let me give you two episodes to illustrate both the way to approach this subject, and the way not to... I had noticed that in a local office equipment shop two printers had been in the window for literally years - well, nearly three to be specific. They were the Star LC10 and the Panasonic 1081, just the sort of basic units I needed. I had ascertained from previous visits to the shop that the owner was sick of the sight of the pair of them. I offered £50 for each. He looked mildly amused at the suggestion. I further pointed out that it gave a poor impression for a supposedly progressive concern to keep displaying such old stock; that every passing day they were less appealing to the buyer, and that took up valuable window space. He concurred, and I saved about £400 on the list price. A colleague on hearing my tale went to his local town and tried the same thing with another shop. He had all but completed the transaction when he insisted on new ribbons, as the present ones were well dried up. This was the last straw, and the manager withdrew his offer. He may even have preferred to give the printers away rather than negotiate from such a weak and humiliating situation. People have their pride. Nobody makes sub cost reductions. A degree of tact is required.

"We'll Match Any Price!" If a dealer advertises to do just this you can hold the shop to such a boast. Occasionally the rival offer is reckoned to be just a loss leader, the parity is refused. Sometimes it is just not feasible to make the journey to the rival *(cheaper)* shop. It is my experience however that most traders in today's cluttered market will indeed match alternative quotes.

The Art Of Barter: One is apt to forget that in many parts of the world it is accepted business procedure to haggle before a deal is completed. It is a way of life in many parts of the far and middle east. In Hong Kong they would think you a mug to accept the initial asking price. Rest assured that most of the big discount houses will have negotiated long and hard before agreeing the prices of the majority of their goods. They can hardly object if you do likewise. It's certainly worth a try. If they are not keen, and you need a range of equipment, offer a deal on an inclusive basis. I have seen software, a printer and a computer reduced by upwards of ten per cent, in some London discount stores, and that on previously reduced price stock.

Flexibility: I once bought a laptop at less than half list price. The reason for such a reduction was that it had a Polish keyboard. It takes but five seconds, using MS-DOS, to configure it to the UK version. I can certainly spare that amount of my time on every occasion I reboot the computer, for so large and painless a saving. Keep an eye open for similar opportunities that may arise.

Try Before You Buy: If you like a piece of hardware, if you know it well, there is no danger in ordering from a reputable discount mail order firm. Micro Computer Mart carries the adverts of many of them. The savings can be appreciable, and warranties are usually more often than not still valid. Why not consider such an approach?

Auctions: These are not for the faint hearted, nor inexperienced, particularly in the case of used stock. Here again though if you know a product well, and see it new and boxed at an auction, you are relatively safe. Not long ago it was possible to buy packed *(untouched)* Amstrad PCW word processors set ups for £100. At that time they normally retailed at four times this. Makes you think...

The Manager's Specials: Certain retail chains sell goods under such a title. Some have boxes missing, some have a superficial blemish. I once bought a computer for a good reduction as it had no MS-DOS primer. I have a stack of these, besides you can usually order them separately if necessary. Check the warranty situation, as some are sold on an "As Seen" basis, with no redress. Also compare the price reduction with those of Micro Computer Mart type box advertisements. There can sometimes be useful and quite large savings that can be made.

Transactions are governed by the basic rules of trade. Generally there is more profit margin on high cost items, and therefore more room for reduction, at least in theory. Clearly a dealer will want the maximum profit possible. However, if you make an offer for a figure less than this, if you clearly are showing intent, you may be successful. A certain, but restricted profit today, may be better than the possibility of a larger one somewhere in the uncertain future.

Seeking good value is more than just satisfying a commercial whim. It may be the means to afford that extra vital component. There really are bargains for the taking. Why not keep an opportunist eye open? You might be surprised at the results.

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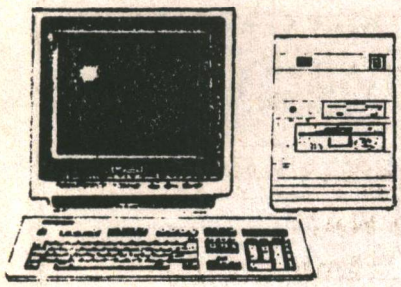

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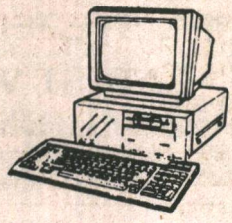

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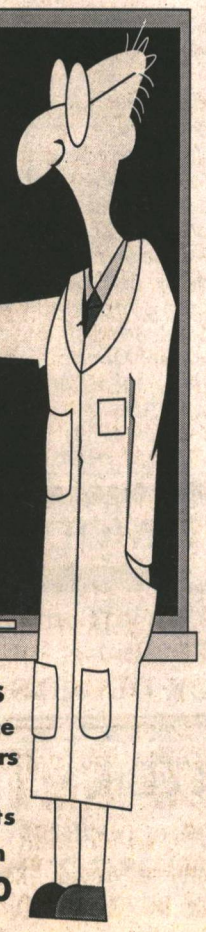

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The BACC Column

British Association of Computer Clubs

This edition of the BACC column sees news on numerous groups spread around the country - some are affiliated to the BACC and some are not, we can only hope that those who are not currently affiliated to the BACC will do so soon - the larger the BACC grows - the more comprehensive the services will be on offer.

I'll start this edition with the three featured groups affiliated to our Association. The first of these is Maidstone Computer Club of Kent. This group is a local club who meet on Wednesdays at the Vinters Park Community Centre, Aldon Close, Maidstone at 7.30p.m. They deal with all machine types and they can be contacted via Stephen Duckworth on 0634 404347 or by post to 91, Magpie Hall Road, Chatham, Kent, ME4 5NB. The other side of London but still on the Eastern side of the country is the Newmarket Computer Club. Again a local group dealing with all machines. They meet at the Scaltback Middle School, Newmarket on a fortnightly basis on Tuesday evenings at 7.15. Their contact is Glyn Price on 0638 778138 or via the post to Lafant House, 2a, New Road, Exning, Newmarket, Suffolk, CBB 7JP.

Moving into the London area is the Harrow Computer Group. These meet on Wednesday evenings at 7.30 at the Kenton Room, Harrow Arts Centre, Uxbridge Road, Harrow. They are a local group dealing with all systems and their contact is D.R. Talmage on 081 429 1463 or 102, Warden Avenue, Harrow, Middlesex, HA2 9LN.

BACC Database

That's the three affiliated featured groups for this edition - more next time. Now for some news of the updating process on the database. We've recently deleted a number of groups from the database as we've had no luck in contacting them either by telephone or by post. These are the Apricot Portable User Group of Milton Keynes; Birmingham Amstrad Users Group; BBC Shareware User Group of Epsom in Surrey; PC-SIG of Sutton Coldfield; Amstrad PD Software of Glasgow; Amstrad User Software Database of Newcastle Upon Tyne; ICPUG Kilmarnock; ICPUG Manchester; ICPUG Prudhoe On Tyne; ICPUG Scarborough; PCW Computer Club of Poole, Dorset; G65/Amiga User Group of St. Albans in Herts; Nova PD Club of Banbury, Oxon; St Club of Bishop Auckland; The Disk Club of Telford, Shropshire; York Railway Institute Computer Club; Future Users Association of London; Grampian Amateur Computer Society of Inverurie; The Deaf Microcomputer User Group of London; Spectrum Unemployed User Group of Caithness in Scotland; and the Tangerine Homebrew Computer Club of Bristol. All these groups are now deleted and if anyone reading this is a member of any of them or better still an organiser from the groups and it is still running, then let me know as soon as you can so that we can re-instate you to the database!

Updated information is now held on the West Surrey Computer Club; Birmingham User Group (Atari & Amiga); Texas Instruments User Group; Topic Of Bournemouth; The Auditors User Group; Key Masters Users Association; Coventry & Warwickshire Commodore Computer Club; Birchwood Archimedes User Group; The official TI99/4a Users Group; BBC Micro Wantage User Group; Retford PCW User Group; Kent Youth ; Computer Group; UK Einstein User Group; The CorelDRAW Users Organisation and the Lynx Disk User Group which used to Known as the Lynx Revival Group.

The database currently stands at 966 entries of which 232 have been updated so far this year, 324 remain from last year, and 299 from 1989. The remainder are from 1988 and are being updated as rapidly as possible. We are in front of our updating targets for this year and hope to have eliminated all the 1988 entries before October and drastically reduced the 1989 entries before the end of the year.

A number of companies are contacting us asking if we can advertise them or their products either in this column or through our groups. If anyone out there is interested we have a newsletter which goes to all affiliated groups and we do take adverts for it but we do charge!! This column is not for advertising products or companies as the MM quite rightly charge for such services. Its what keeps the cost of the copies down - so please companies don't ask for free adverts. Having said this - one quick advert. The Computer Store on the A40 or Priory Street in Carmarthen. Without them getting me a disk-drive cable on a Sunday from their shop this column wouldn't have been written on time. Note to potential advertisers - Micro Computer Mart publish free classified advertisements for private sales - Naturally commercial advertisement is chargeable.

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I've received a number of magazines and news from a number of non-affiliated groups. I am unable to give much space to these but will mention as many as I can. The Lynx Disk User Group have sent their newsletter which contains information mainly on the new group set-up but also an article on RT.128 Version 2.0. Roland Keyboards have sent me their magazine which is a valuable acquisition for those into computers and sound. Hewlett Packard printer User Group gave me a number of their newsletters as IBM '91 and Oric User Monthly sent to their magazine from Aylesbury I do believe they are affiliating so we'll be featuring this group later. Town Hall (Nr. Leeds), at 10am on 27th April and CorelDRAW have their first meeting at Essex Hall, Essex Street, London on the afternoon of 17th April at 2p.m.

Well that's it for this edition. If you are a member of a group, find out if they've affiliated to us yet. If not find out why not!! More details of groups next edition. If you want details of any local national groups or a pack on how to start a group, I will gladly supply them free of charge. The starter pack is for those wishing to start a group or club and not for those new to computing. All I ask for is an SAE. for group contacts a 9"x4" SAE and for the starter pack a 12"x9" SAE with at least 36p worth of stamps on it. If your group or club is interested in joining the BACC or wanting to find out more information on the Association please contact the Membership Secretary whose address is shown below. Contact me for names and information on your local group.

Contributed by: JOHN DALE
(Clubs Database Manager)
'Banc Y Rhosyn', Bron Y Glyn, Bronwydd Arms, Carmarthen, Dyfed SA33 6JB.
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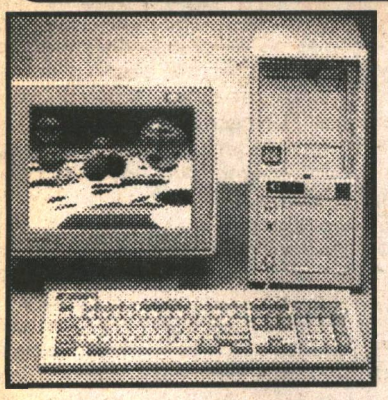

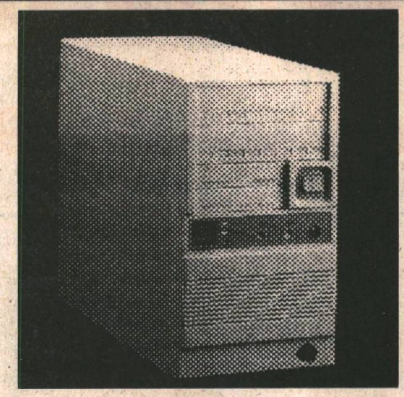

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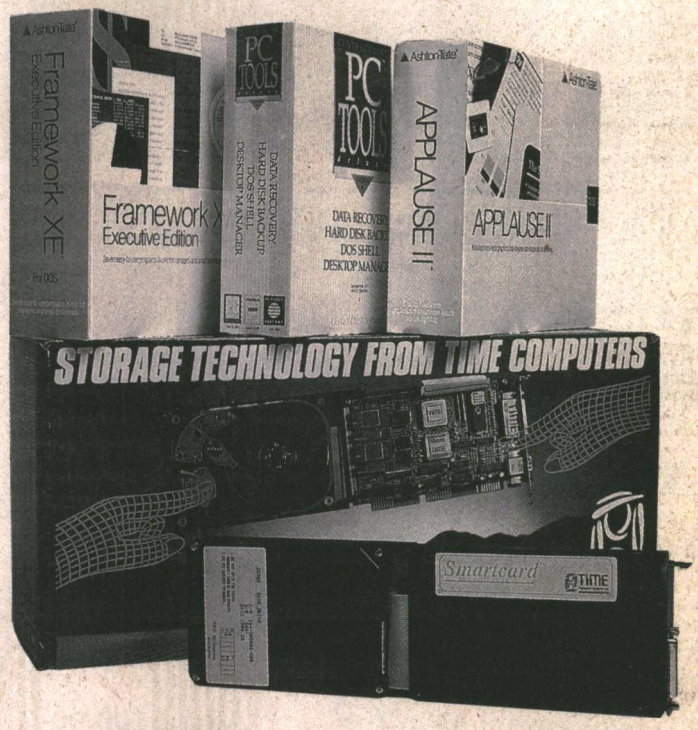

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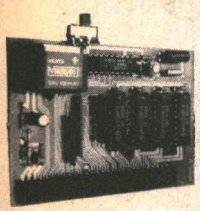

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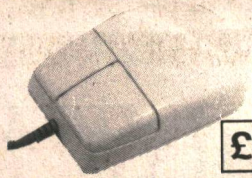

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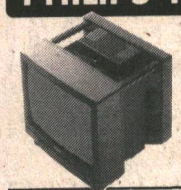

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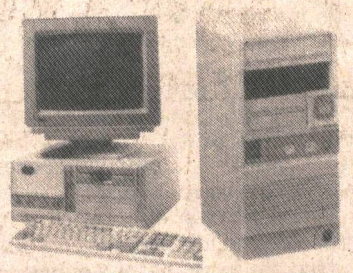

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BeckerTools 2.0

Micro Computer Mart reviews BeckerTools version 2.0 for Windows 3.0...

With the Windows user interface becoming more and more popular, and seemingly bundled with almost every new machine on the market, Micro Computer Mart takes a look at a disk utility program that is run from within the Microsoft Windows version 3.0 environment.

There are many disk toolbox type programs available on the PC market. Packages such as XTree and PC Tools are just two that I could mention. These programs, however, do not run under the Windows environment, the popular package that so many business people are now used to running. BeckerTools is an XTree type program that does, but it also offers a lot more.

BeckerTools was designed for virtually any Windows user. It is a 'friendly' disk and file management interface that anyone can get to grips within the first few minutes of use. It does have many professional features though, so the expert will also find it very useful, giving them easy access to the internals of their hard and floppy filing system.

BeckerTools offers many disk and file commands that were previously unavailable under Windows. Not everyone is familiar with DOS and it's various commands, each command being different and having its own multitude of command line switches. It can be very annoying when you have to re-type a whole line just because you got the syntax slightly wrong - with BeckerTools a command, that would confuse the mind of many in DOS, can be executed at a touch of a mouse button or a key selection.

Features

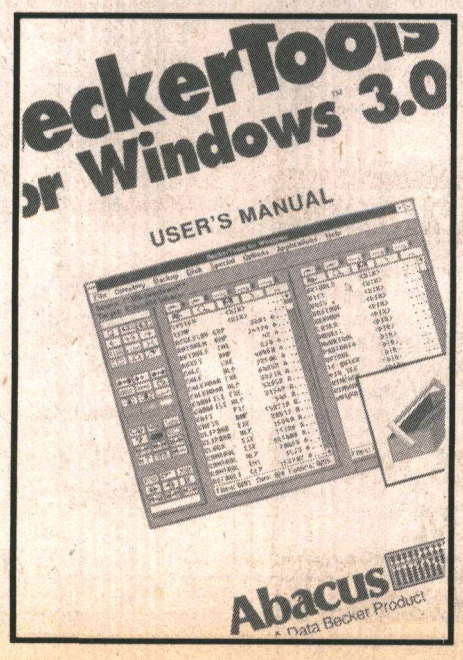
Just some of the features that BKTools offers are undelete deleted files, copy diskettes in a single pass and make multiple copies, verify and compare diskettes in a single pass, format in all DOS formats, move and copy files, directories at a touch of a button, recover deleted directories, view and edit the contents of a text or binary file, personalize your BKTools to suit your own needs, launch other programs from within BKTools, search files and disks for text, filenames and much much more. All of this is offered to you in a professional looking, easy to operate, mouse controlled, display.

An 80286 or better is required to run the package, along with Microsoft Windows version 3.0 or higher, and a Microsoft, or compatible, mouse. A simple to use installation program is provided on the disk, both 3.5" and 5.25" are provided, and all you have to do is execute it from within Windows. The installation program brings up a window so that you can select various options - these include the path for the original disk, the target drive and directory, and the option to have BeckerTools and Starlite *(a second program I shall tell you about later)* autorun when Windows is loaded. Latest information that is not included in the manual is supplied in a text file on the original disk.

When you first start the program you are greeted with a well set out, attractive window. The display will vary depending on the graphics card you are using - in this case we had a VGA card fitted. The usual items found in Windows screens are all there, control-menu box, title bar, menu bar etc. The BKTools screen is split into five areas - the source directory *(the place on your disk that files are copied from)*, the target directory *(where the files are copied to)*, the information are, the toolbox and the menu bar.

The source select area is the place that you'll mainly use to select files for various tasks. At the top of the source window you have icons for selecting the drive, displaying a tree structure, reading the source directory, moving to the root of the disk, moving through directories, and moving back one directory. You can select files and directories with the mouse by simply clicking over the relevant file. Groups of files and directories can also be selected the same way. Each file within the source window has its extension, size, file attributes, and creation date shown. The file attributes can be easily changed an touch of a button. At the bottom of the window you are told how many files and directories there are. The target selection window operates in much the same way as the source window.

On the left hand side of the screen you have the amazing toolbox. This contains 45 icons which are shortcuts for the menu system. Simply placing the mouse over an icon will give you a description of what the icon does at the bottom of the screen, pressing the mouse button will execute the command. Each icon contains a little picture so you get to know which one does what. They are fairly explanatory once you get to know the package a little better.



Menus

If you prefer, there is a large pull down menu system you can use. There are 8 menus in all available from the top of the screen. These include File, Directory, Backup, Disk, Special, Options, Applications, and Help. Most of the commands in the menus are available from the icons *(the ones that you would use most anyway)* but the menu system can be a little easier to understand - whichever you prefer.

The menu system does include some extra features. For instance, you can do things like edit .INI files, very useful, and you even lock the computer so a password has to be entered. The options menu lets you select items such as whether you want to confirm deletes, set the starting directory, choose whether you want the toolbox displayed, etc. There are so many features it would be hard to list and describe them all in this article - there really are a lot!

The manual is very well set out. It is approximately 200 pages long and packed with information. A full tutorial on basic skills such as formatting disks, backing up files, copying and moving files, and much more is given. After that a full reference of the available commands is given, each one described in great detail. All the menus, and just about everything else, are explained so you will easily get to grips with the package.

The BeckerTools distribution disk includes another useful screen utility called Starlite. This is a simple screen blanking program which runs under Windows. For those of you who don't know, what a screen blanker does is wait for a set period of time and if no input from the keyboard of mouse is given, the screen is turned off. This can save your monitor from 'screen burn' which occurs when the same image is on screen for a long period of time without change.

Starlite has various options included. Because a blank screen might be mistaken for a switched off, or crashed computer, Starlite can display a moving star field, a message of your choice which moves around the screen, a fireworks display, or all of the above together. Starlite also offers a password protect option. This allows you to assign a password that must be entered when the computer is reactivated by some sort of input - this stops unauthorised use while you are away from your machine. The program can be selected to autorun upon startup of Windows when you install BKTools.

All in all BeckerTools is a great program for use with Windows, especially if you do a lot of file manipulation, and I highly recommend it to everyone. The retail price is £99.95 plus VAT though, but many features are offered so I would say it is worth it, again if you use Windows a lot. **For more information contact GuildSoft, Wentworth House, Dormy Avenue, Mannamead, Plymouth, Devon, PL3 5BE. Tel: 0752-251155.**

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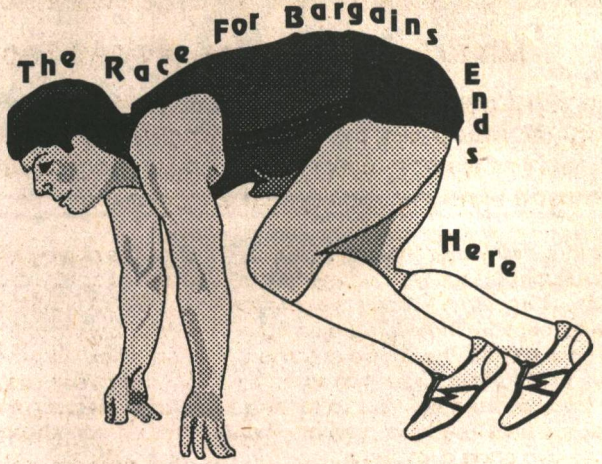

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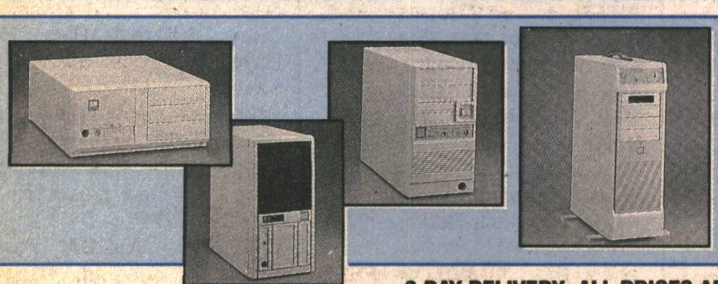

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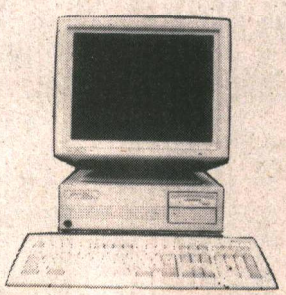

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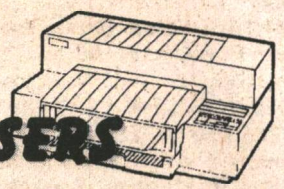

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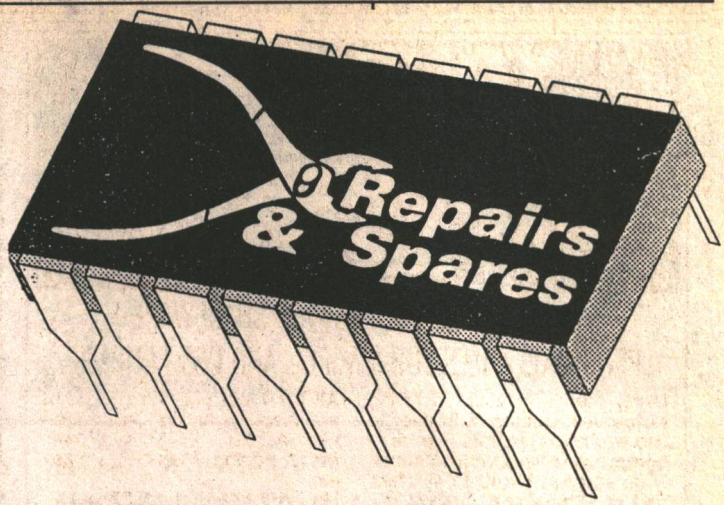

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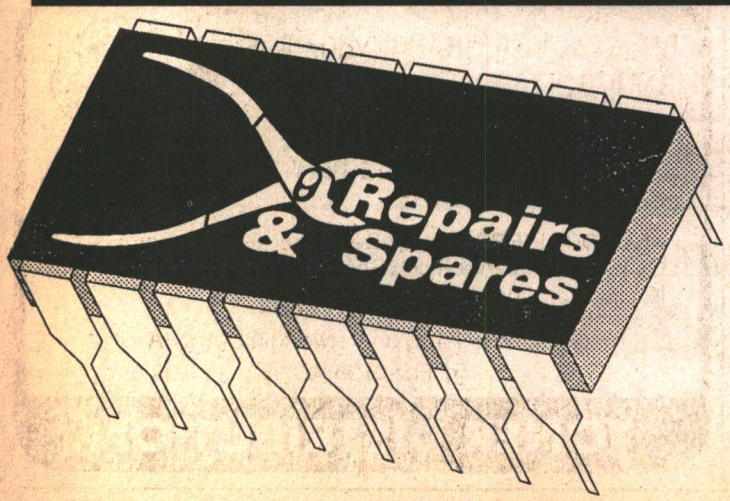

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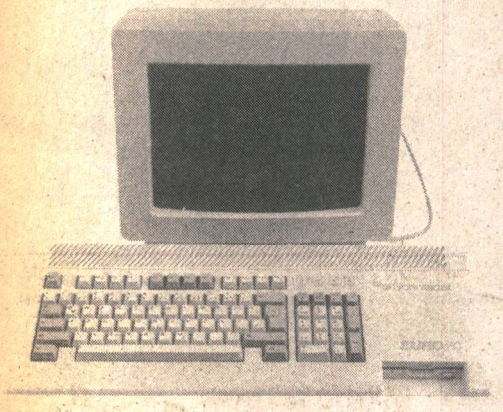

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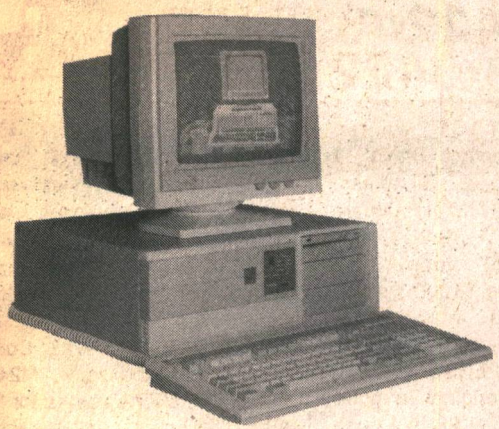

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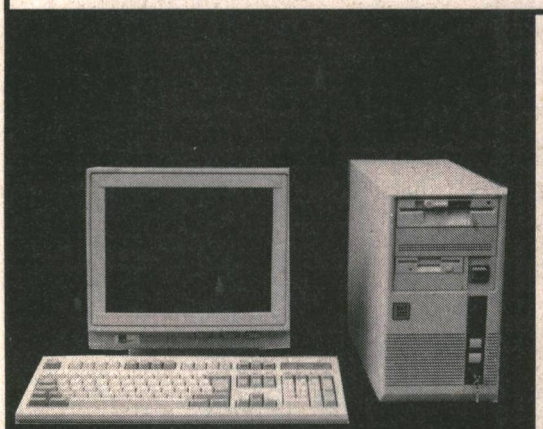

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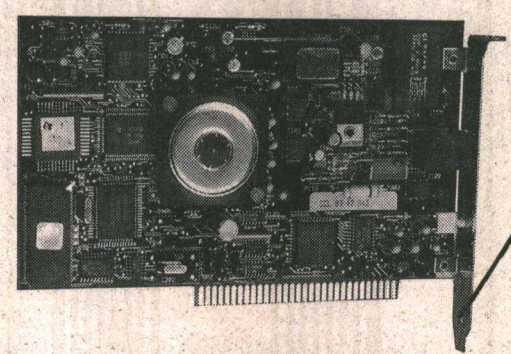

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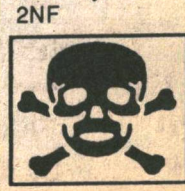

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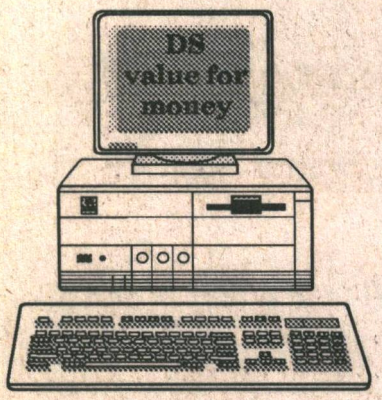

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